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ALTERNATIVES TO CURRENT FEDERAL RESERVE POLICY

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MONETARY AND FISCAL POLICY

OF THE

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ALTERNATIVES TO CURRENT FEDERAL RESERVE POLICY

THURSDAY, JULY 22, 1982

Congress of the United States,
Subcommittee on Monetary and Fiscal Policy
of the Joint Economic Committee,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:10 a.m., in room 6226, Dirksen Senate Office Building, Hon. Roger W. Jepsen (chairman of the subcommittee) presiding.

Present: Senators Jepsen and Symms; and Representatives Richmond and Heckler.

Also present: Bruce R. Bartlett, deputy director; and Robert Weintraub, professional staff member.

OPENING STATEMENT OF SENATOR JEPSEN, CHAIRMAN

Senator Jepsen. The Subcommittee on Monetary and Fiscal Policy of the Joint Economic Committee will come to order.

On a recent trip through Iowa, I received many questions about the Federal Reserve. It wasn't the first time I had questions about the Federal Reserve, but I was especially impressed by the sophisticated level of the questions that were asked. One would think my constituents consisted primarily of economists and financial analysts rather than farm and agribusiness working people.

I attribute this to the persistence of high interest rates and the growing perception that America's central bank—the Federal Reserve—is largely responsible for them. This is a view which I share.

However, simply pointing the finger at the Fed accomplishes little unless we can make clear what it is we think the Fed is doing wrong and what it should be doing differently. Saying that money is too tight or too loose, for example, tells us very little, for we must still ask: tight or loose relative to what?

On the one hand, it is arguable that money is too tight, that the demand for money has risen relative to the supply and that this is causing interest rates to be high. But it is equally plausible to argue that money is too loose, creating fears of renewed inflation down the road. It is even possible that money is too tight and too loose, with short-term interest rates rising from a lack of liquidity while long-term rates continue to embody inflationary expectations.

So until we can decide once and for all whether money growth should be faster or slower, it is unlikely that any amount of criticism of Fed policy is likely to bring about any change. Unfortunately, most criticism of the Fed I hear is of an ad hominem nature and does not direct itself to the question of what the rate of growth of money ought to be.

So I'm hopeful that this morning's witnesses will be able to shed some light on what the Fed's monetary policy ought to be. I know that some of you have proposed fundamental changes in monetary policy. Congressman Kemp and Mr. Reynolds, I know, have eloquently argued for return to the gold standard. As a member of the Gold Commission, I had occasion to look into this issue myself. However, I would ask that the witnesses concentrate on telling me what the Federal Reserve can or should be doing today to improve the performance of monetary policy and bring down our interest rates, rather than discussing fundamental reforms or changes which would require legislation or establishment of some new institutional arrangement.

I don't mean to limit the witnesses exclusively to current Fed policy, but this is what I and my constituents are most concerned about. Moreover, we do not have time to engage in long debates and timewasting political show-and-tell programs. Interest rates are killing our economy today and the policy action needed to bring them down must be able to be implemented today.

At this time I do welcome my very good friend and colleague, a national leader in financial affairs and policy, Jack Kemp. Congressman Kemp will lead off our hearing today and later we will hear from Messrs. Alan Reynolds of Polyconomics, Robert Genetski of the Harris Bank, and David Raboy of the Institute for Research on the Economics of Taxation.

Congressman Richmond, do you have any opening statement?

Representative Richmond. No, Senator. I'd just like to welcome Representative Kemp and tell him how anxious I am to hear his new economic theory. Certainly this Nation needs something right now, don't we, Congressman Kemp?

Senator Jepsen. I thank the Congressman.

Representative Kemp, please proceed.

STATEMENT OF HON. JACK KEMP, A U.S. REPRESENTATIVE IN CONGRESS FROM THE 38TH CONGRESSIONAL DISTRICT OF THE STATE OF NEW YORK

Representative Kemp. I thank my colleague from New York and I also thank the Senator from Iowa. His opening statement is one with which I strongly agree. I think not only that the American people are upset with the high interest rate policy of our central bank, but also that there is a level of sophistication, there is an understanding of this issue, maybe not every nuance of the issue, but certainly the desire of the American people for sound, honest, credible money—a currency that will maintain its value over a long period, one that will rebuild confidence in our financial and mortgage markets, is absolutely understandable from the steel factories of Buffalo to the farms of Iowa. I appreciate the gentleman's trust that the American people are a lot smarter than given credit for by many of those who sit on the banks of the Potomac and suggest that austerity is an answer to the American people's problems.

As I have suggested in the past, austerity is not an answer to our problems; it is the problem; and this austerity imposed on the American economy by our central bank and by high taxes and by regulatory strangulation is something that this President and, I think, our bipartisan Congress, has an obligation to resolve. So I thank the Chair and thank the Senator for his friendship as well as his leadership.

I think these hearings are important, extremely important. I watch, as I think every other American does, for signals and policy changes that might be taken by the chairman of the Federal Reserve, Mr. Volcker.

I think there are things, Mr. Chairman, that the Fed can do within its existing authority to improve monetary policy and to help bring down interest rates. But I also believe that we must reform monetary institutions themselves if we're really going to solve the underlying monetary problem.

I think your earlier statement, Mr. Chairman, that short-term rates are high for one reason and long-term rates are high for another is plausible. It's not contradictory at all, and I think in my testimony, the reasons will come to the surface.

A number of features of monetary policy pursued for the last 3 or 4 years have puzzled economists and policymakers here in Washington. Why has the growth of the money supply become more volatile than it was before the Federal Reserve began trying to stabilize it? Is it due to technical bumbling of central bankers, as monetarists say, or is it due, Mr. Chairman, to the policy itself? Why have interest rates remained high while the rate of inflation has fallen? Why have we seen increased volatility in interest rates and why, for the first time in the history of the business cycle, have there been two recessions in less than 3 years?

To explain these puzzles, I think we have to recognize that monetary policy can pursue really only one of three targets: an interest rate target, a money supply target, or a price target.

Or, if you consider interest rates a price, I think you could break that down really into two things. The Fed can either control the price of money and let the quantity fluctuate, or it can control, as the monetarists would like to do, the quantity of money and let the price fluctuate.

From the breakdown of the Bretton Woods International Monetary System in 1971 until October 1979, basically the Federal Reserve pursued an interest rate target. Strictly speaking, an interest rate target is not really a fixed target at all. Only in theory can the Federal Reserve pursue a single nominal interest rate for all time. As long as the supply and demand change in the money markets, a fixed nominal interest rate is likely to either be deflationary or inflationary, too high or too low.

What is really being targeted is not an interest rate, but the discretion and the judgment of the central bank or the central bankers, who alter short-term interest rate targets as they see fit. The 1971–79 period, for the most part, was a record of steadily rising inflation as the Fed sought to keep the interest rates too low, interspersed with rising interest rates and a severe recession, as the Fed sought belatedly to correct the inflation that it had engendered.

It was a pretty dismal record, Mr. Chairman. In October 1979—I think October 6, to be exact—the Fed changed its target from targeting interest rates to targeting the quantity of money, the supply of money. The primary target, of course, is that measure of money called M_1.

I have some sympathy for monetarism, Mr. Chairman, because I used to share their views on money. In fact, 9 years ago in the "Congressional Record" I approvingly quoted a bright young monetarist from Chicago by the name of Alan Reynolds, one of your next witnesses. Mr. Reynolds had written that Congress should pass a law instructing the Federal Reserve to keep increases in the money supply within a 0- to 4-percent range; better still, replace the Fed's Open Market Committee with a computer program to achieve such monetary stability.

Shortly thereafter, Senator Brock and I introduced legislation which would have limited the Federal Reserve's authority to increase the money supply to 5 or 6 percent a year, depending on circumstances. I think it's significant, Mr. Chairman, that Mr. Reynolds and I are both here to testify today on the failure of the quantity rule or of monetarism itself. I can't speak for Mr. Reynolds, but my own views about monetarism have dramatically changed and did so before the Fed adopted its quantity rule in October 1979. I came to the conclusion, Mr. Chairman, that instead of a quantity rule for the money supply or controlling interest rates, we needed a price rule, one which is aimed at maintaining the dollar at a constant price or value. I submit, Mr. Chairman, that the only purpose of monetary policy at all is to provide a currency, a unit of account, which will maintain its value, thus stabilizing prices and exchange rates—to give the suppliers and producers of goods and services a numeraire; a benchmark and a measure of the value of those commodities.

The usefulness of the quantity rule, it is generally agreed, depends upon two assumptions: first, that the demand for money is predictably stable, and, second, that the central bank can actually control the nominal quantity of money. If either of these assumptions is not correct, then the quantity rule is not a very good idea. I was forced to conclude, Mr. Chairman, that both these assumptions are wrong. The first, that the demand for money is predictably stable, is necessary, as Milton Friedman has written, "in order to give the—quantity—theory empirical content." If the demand for money is not stable, then a policy of fixing the money supply according to some formula will result in greater swings in interest rates, prices, and production; the real economy, Mr. Chairman, rather than banking system, is forced to do all the adjusting to every change in money demand. And that's really what's happened.

The economy has suffered while we've tried to target the money supply or the quantity of money at a fixed level. The quantity of money has become an end in itself without regard to the economy or interest rates. I think Mr. Reynolds wrote in a speech that I inserted in the "Congressional Record" that monetarists are willing to keep the quantity of money stable but let interest rates go up ad infinitum.

Milton Friedman and Anna Schwartz documented in their classic "Monetary History of the United States," that there does seem to have been a reasonably stable connection between the supply of money and national income—such as velocity—as long as the dollar was convertible into gold, which was, Mr. Chairman, as most people know, most of our history. As I pointed out earlier, it was only in 1971 that we went off of some form of a gold standard, such as the Bretton Woods system. It was largely on this historical evidence that the monetarist policy was justified. However, Friedman and Schwartz found that velocity was not so stable during periods of inconvertibility; and the stability of velocity has been steadily disappearing since the suspension of dollar-gold convertibility in 1971.

Velocity has been the most volatile, Mr. Chairman, since the policy of quantity targeting began in October 1979. You can just look at the charts [indicating] and see the date at which these changes in monetary policy were made.

From the first quarter of 1980 to the first quarter of 1982, velocity increased at an average rate of 2 percent a year. That sounds stable, but on a quarterly basis velocity has ranged from a 14-percent rate of increase to a 10-percent rate of decline. The average quarterly deviation from the trend has been 6 percent in either direction. If the money supply were absolutely stable, this kind of change in velocity would mean a 6-percent jump or drop in nominal GNP each quarter due to monetary policy alone. That's what I mean in saying that targeting the quantity of money forces the economy and interest rates and production to adjust to the changes in demand.

The second monetarist assumption, Mr. Chairman, is that the monetary authorities are, in fact, capable of controlling the money supply. I think that is demonstrably erroneous; if by the monetary authorities we mean the Federal Reserve, and if by the money supply we mean what people actually use as money, this assumption cannot be correct either.

In order to control the quantity of money, the Fed must first be able to control what people use as money. In other words, it must be able to control monetary innovation, and we know that that's been impossible. The very attempt to control one kind of money creates an incentive for people to find a new kind of money just outside the official definition which is not subject to the cost of the control. The central bank does not directly control M_1. It can only try to influence M_1 by affecting bank reserves on the assumption that there is some stable relation between the two; but if the attempt to control M_1 encourages the creation of money outside of M_1, it causes these historical relationships to break down, and that has happened.

Consider the fact, Mr. Chairman, that the greatest monetary explosion in this country has occurred among those forms of money which are not controlled as part of the official M_1 definition—money market mutual funds, overnight repos, or repurchase agreements, and overnight Eurodollars being the largest.

In the past 3 years alone, these three components have surged from a volume equal to less than 10 percent of M_1 to almost 50 percent as large as M_1.

For similar reasons, the Bank of England has abandoned its own monetarist experiment, and started to target the exchange rates of Europe—the European Monetary System—which is basically a price rule, although it doesn't have a firm anchor. Charles Goodhart, chief monetary adviser to the Bank of England, has said, "Any measure of money that is officially controlled quickly loses its meaning." Or, as the Council of Economic Advisers put it with the unconscious humor in the latest economic report of the President, "The monetary system is evolving toward one in which the Federal Reserve will have very close control over M_1—suitably redefined from time to time * * *."

The problem with monetarist assumptions is that they overlook the fact that money is chosen by individuals in the market, not by the Government or the central bank. My wife has money market funds which she uses as her savings account. They are sacrosanct. No one can touch them. That's her nest egg. I've got money market funds upon which I'm writing checks. I refuse to believe that Mr. Volcker can define which is money and which is savings.

People choose the form of money by demanding it. Monetarist policy must always come to grief, I think, because it ignores the fact that in the money market, as in every other competitive market, the consumer is sovereign. Attempting to deal with money through the supply alone is destabilizing for the economy. And I think, Mr. Chairman, much of the volatility over the past 3 years in interest rates, prices, output, production, employment, and even the volatility in money supply itself that the monetarists are now criticizing, is the inevitable consequence of trying to directly target the monetary aggregates.

So I recommend, Mr. Chairman, that we stop this experiment with monetarism.

The only remaining alternative target is a price rule. David Ricardo put it back in 1816:

> The issuers of paper money should regulate their issues solely by the price * * * and never by the quantity of their paper in circulation. The quantity can never be too great or too little while it preserves the same value as the standard.

As Milton Friedman has said, in "Capitalism and Freedom," the price rule is "the rule that has most frequently been suggested by people of a genuinely liberal persuasion." We have our arguments in the pages of "National Review," but I greatly admire him for that work and many other works. As Milton Friedman observes, the price rule is the classical view of money, Mr. Chairman.

A price rule takes many forms, but the principle is the same. The monetary authorities maintain the value of the dollar constant in terms of some proxy for the general price level. When the target price rises, the central bank tightens; when the price falls, the central bank eases. Theoretically, you can use open market committee operations; you can use the discount rate; you can use the reserve requirements or regulations; or you can use the purchase or sale of foreign exchange as a tool. But in each case the target is a proxy for the general price level.

Prices tend to rise when the economy is strong and fall when it's weak. Following a price rule results then in monetary restraint during an upswing and ease during a downswing.

But those are the results, Mr. Chairman. I'm not coming here and saying we should tighten or ease by raising or lowering the money supply targets. I'm trying to second-guess the way Chairman Volcker voted the other day. He said in 1982 we shouldn't change the targets and in 1983 we shouldn't change the targets. My point is that the quantity targets are wrong, high or low. I'm not coming here to argue for reflation. I'm coming here to argue that we substitute a price rule for a quantity rule.

A price rule, as I said, Mr. Chairman, manages to combine the goal of price stability with the conditions necessary for full employment. Now let me say to my friend from New York who I know was a sponsor of the Humphrey-Hawkins bill: As Kenneth Arrow, the Nobel Prize winning Keynesian economist said recently, "The position of the liberal activist has been greatly injured because we are unable to reconcile full employment and price stability." No matter what you say about supply-side economics as a theory, at least it has come forth honestly and I think candidly and suggested that they can be reconciled—that if monetary policy gives us price stability and a sound unit of account, and tax and regulatory and fiscal policy are used to encourage production and employment, you can reconcile full employment with price stability by the mix of fiscal and monetary policy.

Some of the specific steps which I propose today could be implemented within the existing authority of the Federal Reserve. I'll briefly list them and then stop and answer questions.

First, the Fed should change the immediate target of its monetary policy, as I said before, from the quantity rule to some proxy for the general price level. Mr. Chairman, you mentioned gold. I hate to bring it up. I know it's a four-letter word and nobody mentions it before 12 a.m. in the morning in civilized surroundings. But despite the fact that it should be whispered, I would shout it from the housetops: G-O-L-D. For the sake of simplicity, reliability, utility, and confidence, the price of gold is a good proxy. It's not perfect, Mr. Chairman, and it's not to be worshipped, it isn't enshrined, it isn't sacrosanct, it isn't anything that should be theological—it's simply utilitarian. It's the commodity most sensitive to monetary developments.

Second, although not as essential as changing the target, the Fed could change its monetary tools. Instead of using open market operations, we could use the discount window for the creation of new reserve credits.

Third, the price rule should be institutionalized for long term. Mr. Chairman, you mentioned long-term interest rates. To bring them down there have to be institutional changes. I know you didn't ask us to testify about it, but I just could not leave here without saying there has to be an institutional change to get long-term interest rates down, get the bond market up, and get the financial and mortgage markets going again and spread out some of the maturity of the U.S. bonds. The average maturity of U.S. bonds has shrunk to such a point that there's just a traffic jam in short-term paper. There is no long-term bond market and credibility is essential to providing a longer time horizon over which we can spread out our portfolio, both privately and publicly.

My long-term institutional change would be that the administration should propose legislation to define the dollar again as a fixed weight of gold, and to provide for the convertibility of Fed liabilities, on demand, into gold. Meanwhile, the United States should convoke an international monetary conference, like the one which established the Bretton Woods system. For the record, Mr. Chairman, I'd like to bring to your attention for reading the outstanding Wall Street Journal editorial, "Bring Back Bretton Woods," concerning the role that it played and the role that it can play in helping restore credibility.

I recommend the price of gold because it's simple, sensitive, and historically a very close proxy for the general price level. Mr. Chairman, my prepared statement outlines the relative advantages of the discount rate and open market operations. Whether the discount rate or open market operations are used, the principle of the price rule is the same. When the price of gold or the Dow Jones Industrial Commodity Index is rising, the Fed should raise the discount rate and sell bonds. When the price of gold falls or the commodity price index is falling, the Fed should lower the discount rate or buy bonds through open market committee operations.

We should quit worrying about M_{1B}—we never need to worry about M_{1B} in this country, Mr. Chairman. No one knew what M_{1B} was or M_1. It's outrageous that we count angels that dance on the head of a pin every Friday and it causes such volatility in our Nation's financial markets.

Finally, what effect on interest rates could we expect if these plans were put into effect? I think it would begin to bring down short-term rates. Obviously, long-term rates are going to take some institutional changes, but I think it would help bring down long-term rates as well and reopen mortgage and financial markets. It would certainly eliminate the unnecessary volatility in interest rates, prices, production, and unemployment caused by the quantity rule. I think it would lower the average level of real interest rates to the degree that volatility has reduced the efficiency of our capital markets.

To summarize, Mr. Chairman, there's a great deal the Fed could do to improve the conduct of monetary policy within its existing authority. It should abandon this monetarist experiment and change its targets to a price rule. It can change the primary tool of policy from open market to the more sensitive discount rate, although either could be used. But we cannot stop there. If we wish to revive the long-term lending in this country, bring interest rates down to the reasonable levels which we used to have in this country, reopen mortgage and financial markets, then there's just no alternative to making the dollar once again as good as gold.

Thank you, Senator.

[The prepared statement of Representative Kemp follows:]

PREPARED STATEMENT OF HON. JACK KEMP

Mr. Chairman, I appreciate this opportunity to testify before the Joint Economic Committee on "Alternatives to Current Federal Reserve Policy." In your invitation, you said the committee is "especially interested in hearing about policies which could be implemented within the current institutional arrangement. In other words, what can the Federal Reserve do today to improve the economic situation, in particular, to reduce interest rates?"

I believe the Federal Reserve could do a number of things with its existing authority to improve monetary policy and begin to bring down interest rates. But I believe we must also reform the monetary institutions themselves if we are really going to solve the underlying monetary problems, and I would like to explain why.

A number of features of the monetary policy pursued for almost the past three years have puzzled economists and policymakers. Why has the growth of the money supply become more volatile than it was before the Federal Reserve began trying to stabilize it? Is this due to the technical bumbling of the central bankers, as the monetarists say, or to the policy itself? Why have interest rates remained high while the rate of inflation has fallen? Why have we seen increased volatility in interest rates, and why, for the first time in the history of the business cycle, have there been two recessions in two successive years?

To explain these puzzles & similar we ~~must~~ have to recognize that monetary policy can pursue only one of three targets at a time: an interest rate target, a money supply target, or a "price" target. Let me briefly examine each of these.

From the breakdown of the Bretton Woods monetary system in 1971 until October 1979, the Federal Reserve pursued an interest-rate target. Generally, it targeted the interest rate on federal funds -- the surplus reserves which banks lend to one another. Open-market operations -- the purchase and sale of government debt -- were the tool used to pursue this target. If the federal funds rate fell below target, the central bank sold bonds; if it was above target, the Fed bought bonds. The discount window was used, of course, but was viewed as symbolic of Federal Reserve policy rather than as its primary tool.

Strictly speaking, an interest rate target is not really a fixed target at all. Only in theory can the Federal Reserve pursue a single nominal interest rate for all time. As long as supply and demand change in the money market, a fixed nominal interest rate is likely to be either deflationary -- if it is too high -- or inflationary -- if it is too low.

For example, if the Federal Reserve seriously attempted to fix the federal funds rate at some point below the noninflationary level, it would sooner or later cause a hyperinflation. To lower the interest rate at first, the Federal Reserve would have to create an excess supply of money. This would cause prices to rise. The rise in prices, in turn, would cause an increased demand for loans at the central bank's now-bargain interest rate. If the central bank actually satisfied all this new demand at its target interest rate, prices would rise exponentially. In practice, inflationary pressure would soon force the central bank to raise its interest-rate target.

What is really being targeted, then, is not an interest rate but the discretion and judgment of the central bankers, who alter the short-run interest rate targets as they see fit. The 1971-1979 period was for the most part a record of steadily rising inflation -- as the Fed sought to keep interest rates too low -- interspersed with rising interest rates and increasingly severe recessions -- as the Fed sought belatedly to correct the inflation it had engendered.

Largely because of this dismal record, in October 1979 the Federal Reserve switched from targeting interest rates to targeting the quantity of money. The primary target is the measure of money called M1. However, since the central bank cannot control this aggregate directly, it uses open-market operations to achieve a target level of bank reserves, according to a changing formula which the Federal Reserve believes will result in the desired quantity of M1.

This policy is based on the monetarist idea, in the words of Milton Friedman, "that a steady rate of monetary growth would promote economic stability and that a moderate rate of monetary growth would prevent inflation."

I have a certain sympathy for the monetarists, because I used to share their views on money. In fact, nine years ago in the Congressional Record I approvingly quoted a bright young monetarist named Alan Reynolds -- who happens to be testifying here with me. Reynolds had written that "Congress should pass a law instructing the Federal Reserve to keep increases in the money supply within, say, a zero-to-four percent range. Better still, replace the Fed's Open Market Committee with a computer programmed to achieve such monetary stability." Shortly thereafter, Senator Bill Brock and I introduced legislation which would have limited the Federal Reserve's authority to increase the money supply to 5% or 6% a year, depending on circumstances.

I think it's significant that both Reynolds and I are here to testify on the failure of monetarism. I can't speak for Alan, but my own views about monetarism had dramatically changed before the Federal Reserve adopted the quantity rule in October 1979. I came to the conclusion that "Instead of a 'quantity rule' for the money supply, we need a 'price rule,' one which is aimed at maintaining the dollar at a constant price or value."

The usefulness of the quantity rule, it is generally agreed, depends on two assumptions: first, that the demand for money is predictably stable, and second, that the central bank can actually control the nominal quantity of money. If either of these assumptions is not correct, then the quantity rule is not a very good idea. I was forced to conclude that both assumptions are wrong.

The first assumption -- that the demand for money is predictably stable -- is necessary, as Milton Friedman has written, "in order to give the (quantity) theory empirical content." If the demand for money is not stable, then a policy of fixing the money supply according to some formula will result in greater swings in interest rates, prices and production; the real economy rather than the banking system will be forced to do all the adjusting to every change in money demand.

As Milton Friedman and Anna Schwartz documented in their magnificent Monetary History of the United States, there does seem to have been a reasonably stable connection between the supply of money and national income -- velocity -- as long as the dollar was convertible into gold, which was most of our history. It was largely on this historical evidence that the monetarist policy was justified. However, Friedman and Schwartz found that velocity was not so stable during periods of inconvertibility. And the stability of velocity has been steadily disappearing since the suspension of dollar/gold convertibility in 1971.

In fact, the velocity of money has been the most volatile since the policy of quantity-targeting began. From the first quarter of 1980 to the first quarter of 1982, velocity increased at an average rate of 2% per year. That sounds fairly stable. But on a quarterly basis, velocity has ranged from a 14% rate of increase to a 10% rate of decline. The average quarterly deviation from the trend has been 6% -- in either direction. If the money supply were absolutely stable, this kind of change in velocity would mean a 6% jump or drop in nominal GNP each quarter due to monetary policy alone.

The curious thing is that even the growth of the money supply has become more volatile since the Federal Reserve began trying to stabilize it. The money supply grew more smoothly back when the dollar was convertible into gold, and when the Federal Reserve was targeting interest rates, than it has since October 1979. Some monetarists blame this on technical incompetence or lack of good faith on the part of the Federal Reserve. This assumes, of course, that the Federal Reserve can control the money supply. I will deal with that question in a moment. But I think a more likely explanation is that increased volatility in the money supply is an inherent side effect of trying to stabilize the money supply directly. On the one hand, fixing the money supply results in greater fluctuations of interest rates, prices and output. On the other hand, interest rates, prices and output are three major factors influencing the demand for money. Attempting to target the quantity of money, in other words, destroys the stability of money demand which is the justification of the policy. Only if we ignore the crucial role of money demand in determining money supply can it surprise us to find that attempting to stabilize the money supply directly destabilizes the money supply.

The second monetarist assumption is that the monetary authorities are in fact capable of controlling the money supply. If by the monetary authorities we mean the Federal Reserve, and if by the money supply we mean what people actually use as money, this assumption cannot be correct, either.

In order to control the quantity of money, the Federal Reserve must first be able to control what people use as money. In other words, it must be able to control monetary innovation. But the very attempt to control one kind of money creates an incentive for people to find a new kind of money, just outside the official definition, which is not subject to the costs of control. As I have observed, the central bank does not directly control M1. It can only try to influence M1 by affecting bank reserves, on the assumption that there is some stable relation between the two. But if the attempt to control M1 encourages the creation of money outside of M1, it causes these historical relationships to break down. Consider the fact that the greatest monetary explosion in this country has occurred among those forms of money which are not controlled as part of the official M1 definition -- money market mutual funds, overnight repurchase agreements and overnight Eurodollars being the largest. In the past three years alone, these components have surged from a volume equal to less than 10% of M1, to almost 50% as large as M1. In the words of Charles A.E. Goodhart, chief monetary adviser to the Bank of England, which has abandoned its own monetarist experiment: "Any measure of money that is officially controlled quickly loses its meaning." Or, as the Council of Economic Advisers put it, with unconscious humor, in the latest Economic Report of the President: "The monetary system is evolving toward one in which the Federal Reserve will have very close control over M1, suitably redefined from time to time . . . "

The problem with both monetarist assumptions is that they overlook the fact that money is chosen by individuals in the market, not by the government or the central bank. People choose the form of money by demanding it. Monetarist policy must always come to grief, because it ignores the fact that -- in the money market as in every other competitive market -- the consumer is sovereign. Attempting to deal with money through the supply alone is destabilizing for the economy. Much of the volatility over the past three years in interest rates, prices, real output, and even the money supply itself is the inevitable consequence of trying to directly target monetary aggregates. And so I recommend that we abandon the Federal Reserve experiment with monetarism.

I don't claim any particular originality for this analysis. In fact, the problems with both the interest-rate target and the money-supply target are widely recognized. The trouble is, few seem to have an alternative to current policy. In a widely publicized speech last December, the President of the Federal Reserve Bank of New York, Anthony Solomon, catalogued all the problems with the current policy of targeting monetary aggregates. But the only alternative he could come up with was

> to downgrade the role of all actual and potential financial aggregates to that of intermediate targets. Conceivably, at least, the Open Market Committee could turn to articulating its objectives more directly in terms of growth for nominal GNP. To accompany such an approach there could perhaps be some broadly framed constraints on real interest rates and a renewed emphasis on nominal interest rates as short-term operating objectives.

In other words, pretty much a return to the pre-October 1979 policy.

Likewise, in JEC testimony last month, Federal Reserve Board Chairman Paul Volcker favored supplementing the quantity targets with greater

> elements of judgment, interpretation, and flexibility in judging developments in money and credit and in setting appropriate targets.

It seems as if the only alternative to monetarism contemplated by Federal Reserve officials is a return to the sort of discretion on their part which characterized the ill-fated pre-1979 policy. I believe that we can do better. The monetarists are correct in believing that some rule should guide monetary policy; the only problem is that they have given us the wrong rule.

The only remaining alternative target for monetary policy is a "price rule." As David Ricardo put it, back in 1816: "The issuers of paper money should regulate their issues solely by the price . . . and never by the quantity of their paper in circulation. The quantity can never be too great nor too little while it preserves the same value as the standard."

A price rule may take many forms, but the principle is always the same: the monetary authorities maintain the value of the dollar constant in terms of some proxy for the general price level. When the target price rises, the central bank tightens credit; when the price falls, the central bank eases credit. If the proxy is a good one, a price rule not only leads to stable prices in the long run; it is also a contracyclical policy. Since prices tend to rise when the economy is strong and fall when it is weak, following a price rule results in monetary restraint during an upswing and ease during a downswing -- just when each is needed, and without any "fine-tuning." A price rule, in other words, manages to combine the goal of price stability with the conditions necessary for full employment.

For the past several years, Mr. Chairman, I have been advocating a price rule for Federal Reserve monetary policy. Some of the steps which I propose today could be implemented within the existing authority of the Federal Reserve. But I am convinced that to restore long-term confidence to our monetary policy, it is also necessary to reform our monetary institutions. This should not be surprising, since our fall into monetary disorder was begun by a change of institutions. Here are my proposals.

First, the Federal Reserve should change the immediate target of its monetary policy from a monetary aggregate to some proxy for the general price level. For the sake of simplicity and reliability, I suggest the price of gold, which is the commodity most sensitive to monetary developments.

Second, although not as essential as changing the monetary target, the Federal Reserve could also change its monetary tools. Instead of using open-market operations, the Federal Reserve could rely on the rediscount window for the creation of new Federal Reserve Bank credit. In other words, all new reserves would be borrowed, and the Federal Reserve would once again become the lender of last resort. This has advantages which I will outline.

Third, the price rule should be institutionalized. The Administration should propose legislation to define the dollar again as a fixed weight of gold, and to provide for the convertibility of Federal Reserve liabilities on demand into gold. Meanwhile, the United States should convoke an international monetary conference, like the one which established the Bretton Woods system. The purpose would be to reconstitute an international monetary system based on gold.

Why the price of gold? Several other proxies for the price level have been suggested: the exchange rates of strong foreign currencies, more or less comprehensive price indexes, even real interest rates. The exchange rate of a country which has no inflation might serve; but there are few such countries, and no guarantee that they will remain so. Besides, for the currency of the largest economy in the world to be tied to, say, the Swiss franc, is a distinct case of the tail wagging the dog.

Comprehensive indexes such as the producer or consumer price index are not useful for policy purposes, because they are available only after the fact; and even then, they are subject to substantial revision. Obviously, the same objection applies to calculating real interest rates -- as well as the additional problem that we don't know which real interest rate is appropriate. There would be less objection to using a daily commodity price index, though it, too, has some technical problems.

The price of gold is simple, sensitive, and historically a very close proxy for the general price level.

What is the advantage of the discount rate? While open-market operations are an active, quantity-oriented instrument, the discount rate is passive and price-oriented. It is itself a sort of price rule. Without open-market operations, the discount rate precisely matches the demand for money with the appropriate supply of money at the prevailing discount rate, which is usually kept just above the market rate (on loans eligible for discount). When rising demand for money brings market interest rates to the discount rate, borrowers come to the central bank, which supplies new money to the market in the form of loans.

Likewise, when the demand for money falls, market interest rates fall. Loans at the central bank become relatively more expensive, and are refinanced as they mature in the market. This reduces the supply of money. The central bank raises the discount rate when it wishes to tighten credit, and lowers the discount rate when it wishes to ease credit. This is a far more simple and market-oriented tool than open-market operations.

But whether the discount rate or open market operations are used, the principle of the price rule is the same: when the price of gold rises, the Federal Reserve should raise the discount rate or sell bonds. When the price of gold falls, the Fed should lower the discount rate or buy bonds.

This much, Mr. Chairman, could be accomplished under the existing authority of the Federal Reserve. The October

1979 changes in policy were not mandated by Congress, and so abandoning these changes would not require the authority of Congress (though it could be argued that the Humphrey-Hawkins Act would still require the Fed to publish money-supply data as a matter of information).

But we need to go further if we really want to solve what's wrong with our monetary policy. What's wrong is characterized by the virtual disappearance of a long-term bond market in this country, by the drastic shortening of the time-horizons of our capital markets, and by the unprecedented levels of long-term interest rates. In order to bring down long-term interest rates to historical levels, investors must be convinced that any current success in reducing inflation will not be reversed in the future. If keeping a price rule is merely up to the discretion of the Federal Reserve, those assurances will depend merely on who happens to be at the Federal Reserve in the future. And as we have seen, the record of the 1970s is not very good in this respect.

Under a discretionary price rule, reactions to the price of gold must be conscious and voluntary. But the convertibility of dollars into gold is a semiautomatic price rule. A rise in prices immediately brings people to the bank with surplus dollars, demanding gold at the official rate; a fall in prices brings people to the bank demanding dollars for gold at the official rate. Gold convertibility not only provides a signal to the authorities about what action to take, but also initiates the correction, since it involves the creation or extinction of money. And since the central bank's solvency depends on maintaining its gold reserve, convertibility is a price rule which cannot be ignored.

It is sometimes argued that, if the monetary and fiscal authorities have the will to end inflation, gold convertibility is no longer needed. I argue, on the contrary, that if the policymakers have the will to end inflation, it is foolish not to make the dollar convertible into gold. The semi-automatic mechanism of convertibility is vastly more efficient than attempting to manage the nation's currency by the seat of the pants, or according to last year's computer program. Convertibility uses the market itself as its computer, and the software is always up to the minute. Convertibility also ends all the after-the-fact hand-wringing about central bankers who wait until it is too late to take the appropriate action. Under gold convertibility, the central bankers still have some discretion, but that discretion is limited by their solvency, not by their omniscience or good-will.

What effect on interest rates could we expect if this plan were put into effect? First, it would eliminate the unnecessary volatility in interest rates, prices, and production caused by the quantity rule. This would also lower the average level of real interest rates to the degree that the volatility has reduced the efficiency of our capital markets.

Second, long-term interest rates would fall to the degree that people believed the government could maintain its price rule indefinitely. This is why permanent institutional reform, in the form of dollar-gold convertibility, is essential. More than this, I believe it is inevitable. Let me repeat that the market, not the Federal Reserve or the Congress, is master of money. Optimism about the future of managed paper money is a clear case of the triumph of hope over experience. If we do not choose to re-monetize gold, people in the market will progressively choose to de-monetize the dollar.

In summary, Mr. Chairman, there is a great deal the Federal Reserve could do to improve the conduct of monetary policy within its existing authority. The Federal Reserve should abandon the failed monetarist experiment and change its target from a quantity rule to a price rule. It could also change its primary tool of policy from open-market operations to the more sensitive discount rate. But we cannot stop there. If we wish to revive long-term lending in this country and bring interest rates down to reasonable levels, there is no alternative but to make the dollar, once again, as good as gold.

Senator JEPSEN. Thank you, Congressman Kemp. It's very refreshing for someone who gets excited over the problems that we have in this economic system of ours and I would, as sort of a springboard for a question I have, like to reaffirm what velocity means.

I understand that velocity now is the connection between the supply of money and national income. Is that as you understand it, Congressman?

Representative KEMP. Money and income, money and GNP. The velocity could be going or very likely would be going in the opposite direction of M_1, and the swings in velocity, as I pointed out in my testimony, have really become volatile since this October 6, 1979, target became the rule for the Fed.

And just to put a footnote on that, that's the problem with just looking at M_1 as a target, Mr. Chairman. The money supply alone does not give you the proper signal as to what or how to conduct monetary policy. If the money supply growth were very high and the velocity were very low, it would send exactly the wrong signal to the central bank if the central bank were only using the supply of money as its target.

Senator JEPSEN. There's a lot of concern about the high interest rates. There's talk now about credit controls. What effect would credit controls have on, one, money growth; and, two, velocity?

Representative KEMP. We've tried that two times since I've been in Congress, once under President Nixon and once under President Carter, and both were—I'm not going to say disasters, but pretty close to it. And I'm disturbed that it has been raised as a specter in this administration—I've heard people say that we have other techniques—if interest rates don't come down, we have other techniques that we can use; we've got other things in our hip pocket. Well, what is that but a dangerous signal to the financial markets and the American consumer. That unless you're producing or consuming in areas of the economy that the Washington bureaucracy believes are in the interest of the country, that you're not going to get a supply of credit.

Mr. Chairman, I can't tell you exactly how credit controls impact on velocity. There are factors working in both directions. But as far as I'm concerned, every experiment with credit controls—credit allocation, credit rationing—has ultimately raised interest rates and it's caused shortages. We've had these experiments before and they've always been disastrous in their consequences.

Senator JEPSEN. Congressman Richmond.

Representative RICHMOND. Thank you, Mr. Chairman.

Mr. Kemp, I think we both agree that the biggest problem we have today is high interest rates, right? That's causing the general stagflation we have and the inability of people to buy houses, the inability of the transportation industry to function, and the inability of manufacturers to modernize their factories. I think we agree that interest rates are probably the biggest problem we have in American economics.

Representative KEMP. Well, the biggest problem, Mr. Richmond, is that there's been a breakdown in the monetary policy, the monetary standard has been disrupted; but interest rates are a manifestation—my answer to your question is interest rates are a manifestation of an even greater problem which is the breakdown in trust and confidence in the monetary standard in this country.

Representative RICHMOND. As you yourself say in your prepared statement, "Likewise, when the demand for money falls, market interest rates fall." So basically, you've got a problem of supply and demand. Therefore, you talk about gold. I think gold is quite antiquated. I don't really believe in gold as a very valuable commodity. Gold to me is something artificial, useless, and archaic.

Representative KEMP. You know the interesting thing, Mr. Richmond, it doesn't matter what Congressman Fred Richmond thinks, or Senator Steve Symms thinks, or Representative Jack Kemp thinks, or anybody thinks, or what most economists think; there are 4 billion people on this earth who still think that it's valuable. And as long as they think that it's valuable, there's nothing that you can say or do about it because that's what determines the demand for gold, not what Congressman Fred Richmond thinks, with all due respect.

Representative RICHMOND. Personally, I think we both agree it's supply and demand. The biggest user of money in the United States today is the Federal Government which must go into the market each week with Treasury bills which they put out on general auction in order to support the Government. Therefore, it should be clear to all of us that the big problem we have is the Federal deficit and that this tax cut probably was the worst thing that this administration could possibly have done. It will lead to a deficit which this year will not be $100 billion, but probably $150 billion, because you and I know that income will be nowhere near what the Federal Government estimates this year. One reason for the revenue shortfall is the fact that the average manufacturing company is doing very badly. When you do badly, what you do is you clean house.

So I think the income expectations of the Federal Government will be far below what they actually receive. Therefore, don't you think we ought to address ourselves to the main problem of balancing our Federal budget by increasing taxes and decreasing expenditures to a point where the Federal Government will not drain off all of these savings of the entire United States? The American people will save, this year, $200 billion. The Federal Government will go in there and drain off $150 billion just to support the Government.

How can you get interest rates down when, as you say, your demand is high. It's a matter of supply and demand.

Representative KEMP. Well, OK, let me take a shot at it. Incidentally, I want to welcome you to the philosophy of fiscal conservatism. This Damascus road experience through which many of our liberal friends are going is welcomed by those of us who—I'm being a little bit facetious——

Representative RICHMOND. Mr. Kemp, as you know, the liberal Democrats didn't vote for tax cuts.

Representative KEMP. Well, the idea of cutting spending is not usually in the arena of the liberal Democrat but I will grant you——

Representative RICHMOND. The first thing we didn't vote for was to reduce the income of the Federal Government. I don't want my taxes reduced. I want the Federal Government deficit reduced.

Representative KEMP. Well, let me just make a point. I was going to go on to be critical of fiscal conservatism or at least the orthodox fiscal conservatives who believe that you could never change the tax code until you got the taxes so high as to bring expenditures and revenues into balance. Somehow that was an elusive target. We never got from here to there, I would say to you, Mr. Richmond, because every time we raised taxes further on the American economy, on enterprising American people and enterprises in America, the economy went into a contraction and unemployment went up and many of the programs that were indexed to the economy simply ran away with the Federal Government's ability to spend.

Consider the last few times we've tried to balance the budget by raising taxes, as President Reagan has said and I've said and Senator Symms has said and hopefully even you will be saying some day—President Johnson tried to do it in 1968 with a 10-percent surtax. We didn't balance the budget except on paper. We balanced it on paper but we went into a recession. Unemployment went up and output and production went down and we ended up with a bigger deficit. Then Mr. Nixon put on wage and price controls, devalued the dollar, suspended the convertibility of the dollar, put on import quotas—I mean, it just caused total disruption.

President Carter tried to balance the budget by raising taxes. Do you remember in April 1980, we balanced the 1981 budget. We came up with a balanced budget on paper. Revenues were $613, expenditures were $612. There was a billion dollar surplus. And the economy fell very fast. The deficit didn't go down; it went up. Interest rates didn't go down; they went up.

But it isn't conservative or liberal that I'm arguing for. It's maybe a synthesis of these two dialectically opposed positions and the synthesis is this: That you can either get interest rates down by reducing the demand for credit, which is an austerity program which you want to follow and I don't, or you can get interest rates down by increasing the supply of credit by making credit available in the way in which I have talked about.

Representative RICHMOND. But that's going to increase inflation, Congressman Kemp.

Representative KEMP. Credit is fungible. It's dynamic, not static, and I don't see it as the Government taking this much and the private sector taking this much. There can be credit when people believe once again in the money. Credit comes from the Latin "credo," I believe. Credit comes from the word "I believe," and there used to be trust. You could believe in the money. And when people believed that the currency would maintain its value over a long period of time, Congressman Richmond, there was credit. Interest rates were 5 and 6 percent. We floated 100-year railroad bonds in this country.

Representative RICHMOND. Congressman Kemp, you're forgetting inflation. The minute you follow your formula, you might reduce interest rates a couple points, but you're going to increase inflation a couple points; and therefore, the misery index will be the same. Can you follow that? This Nation is laboring under a miserable misery index as you know, which is enhanced by unemployment, inflation, and interest rates.

Senator SYMMS. Which is down from what it was.

Representative RICHMOND. Senator Symms, the Reagan administration against the Carter administration——

Senator SYMMS. It was down.

Representative RICHMOND. Not much, though.

Senator SYMMS. Quite a bit.

Representative RICHMOND. My feeling is, if we follow the Kemp formula, which I think is kind of archaic, with all respect to you——

Representative KEMP. That's all right.

Representative RICHMOND. We might drop interest rates but we're going to increase inflation. What do you gain? Nothing.

Representative KEMP. Well, let me make my point, then, that you didn't hear, which is——

Representative RICHMOND. I listened closely.

Representative KEMP. Well, you might have, but you missed something. Inflation causes prices to rise and my point was that—gold is a proxy—when prices begin to rise, the Fed would reverse its policy and either raise the discount rate or sell Government bonds and thus contract reserves out of the system; but if prices are falling, which has been happening, you ease, Mr. Richmond—there's been a deflation in this country—farm prices falling, commodity prices falling, people trying to get cash and liquidity to finance the debt that they had incurred in the 1970's when inflation was the problem. Inflation is not the problem right now. Deflation is the problem.

And when there is a deflation, that is a signal, with high interest rates, that we have taken too much liquidity out of the system and we need to inject reserves. I'm arguing, Congressman, for a different rule. And I would ask you, in the spirit of this occasion, what rule would you follow? You don't like gold. You think that gold is an archaic subject. What, then, would you follow?

Representative RICHMOND. Wage and price controls, Congressman Kemp.

Representative KEMP. I'm glad you brought it up Congressman Richmond.

Representative RICHMOND. I think wage and price controls——

Representative KEMP. You want to tell the working men and women of America that you're going to control their wages, irrespective of what the Federal Government does to the value of their currency?

Representative RICHMOND. What's the most successful economy today?

Representative KEMP. Talk about a barbaric economy.

Representative RICHMOND. What's the most successful economy in the world today? The Japanese. The Japanese have low interest rates, low inflation, and very, very secure wage and price controls.

Representative KEMP. They do not have wage and price controls.

Representative RICHMOND. They don't?

Representative KEMP. They do not.

Representative RICHMOND. MITI, the Ministry for International Trade and Industry, doesn't pretty well dictate wage and prices? You bet they do.

Representative KEMP. You've already backed off.

Representative RICHMOND. As you know, Japan has a totally controlled Government. Industry and Government are interlocked and labor, too, is interlocked and they indeed do control wages and prices, as they control interest. And they have the most advanced economy in the world today.

Representative KEMP. Are you suggesting that wages cause inflation?

Representative **Richmond**. I'm suggesting that wages and prices——

Representative **Kemp**. Are you suggesting the American——

Representative **Richmond**. I'm suggesting that the big problems we have in this Nation today are inflation and interest rates.

Representative **Kemp**. You're suggesting that the working men and women of America, by demanding wages for the product of their labor, are the cause of inflation.

Representative **Richmond**. I'm suggesting that if we can control wages and prices, everyone would be a lot better off.

Representative **Kemp**. Well, Diocletian tried and the penalty was death. And it didn't work for Diocletian in ancient Rome and it didn't work for Richard Nixon. If you want to go back to Richard Nixon's economic policies, that's OK with me, but I don't.

Representative **Richmond**. In retrospect, I think some of them were very good.

Representative **Kemp**. You can defend it but I can't.

Representative **Richmond**. My time is up. Thank you.

Representative **Kemp**. I enjoyed the exchange.

Senator **Jepsen**. Senator Symms.

Senator **Symms**. I enjoyed that exchange so much I'm almost ready to yield my time back over to you.

Representative **Kemp**. That would be a disappointment, Mr. Symms.

Senator **Symms**. Well, I want to go back to this point about the Fed's policy, what they did from 1971 until 1979. What did they do before 1971?

Representative **Kemp**. Before 1971?

Senator **Symms**. What was their policy then?

Representative **Kemp**. The Bretton Woods International Monetary System, in which the dollar was anchored to gold and the exchange rates of the world were fixed to the dollar. Most of the currencies of the world were tied to the dollar because the dollar was basically convertible through international banks in exchange for gold. We didn't have a pure gold standard. We had what was called a gold exchange standard, but we had low interest rates. It wasn't a cure for every problem, but we had low exchange rates and a bond market with maturities of at least 30 years on the average and the supply siders would say that that was far better than what we've had since 1971. If we wanted to use policy tools to get out of recession, we should have used fiscal tools, such as lower taxes, instead of trying to stimulate the economy by reflating or easing up on the money supply, which we have done since 1971.

Senator **Symms**. Well, what I'm getting at is, we don't have control—and Mr. Volcker was down here either before this subcommittee or one of the committees I'm on, and I asked him how much of the money supply the Fed really has control over, back to the point you made about money-market funds and so forth, and I believe—staff may correct me, but I asked him if he thought maybe they had control of 10 percent when they talked about M_1 and 90 percent of it is out there. Do you agree with that?

Representative **Kemp**. I would be silly to guess. It's almost as bad as trying to look at M_{1B}. I don't know. I don't have any idea.

Senator **Symms**. So you really don't know.

Representative **Kemp**. Senator, I would just say the gross product apparently, according to last night's news, started in June to go up a little over 1 percent after a 5-percent drop in the first quarter. Now, take it out of politics for just a moment and imagine an economic recovery in the third quarter of, say, 3 or 4 percent. People would want to hold cash. They would want to rebuild their money balance. They would want to have liquidity. And M_{1B} should be rising in a recovery. But if Paul Volcker—and I don't mean Paul Volcker in a personal sense or an ad hominem sense—but if the central bank of the United States sees M_{1B} start to climb over its fixed target of 5 percent and you begin to sell bonds and pull reserves out of the banking system and overreact to the increase in M_{1B}, they could shut off a recovery, and that's my fear.

Senator **Symms**. That's exactly what's happening. You take in my State, where it's a mining State and timber producing State, and up until the recent squeeze on the interest rates has been a big growth State, there's been a big homebuilding industry. And then agriculture, of course, is an interest-rate-sensitive industry which is the bigget one in the State. But the five I mentioned—homebuilding, mining, timbering, forest products, and agriculture—that's what they do in Idaho. They suffer when the Fed tries to run this system based on the money supply at the expense of all those people that have money in money market funds—I mean, we suffer for the benefit of all those people. There's a whole constituency of people out there that like high interest rates.

Representative **Kemp**. True.

Senator **Symms**. And it's at the expense of the producers in the country.

Representative **Kemp**. True; the point we tried to make as supply siders is we don't want inflation, Congressman Richmond, or deflation. We want price stability. Inflation rewards the borrower at the expense of the lender. That happened in the 1970's. Borrowers were basically subsidized at the expense of lenders in this country. The combination of the tax system in this country and inflation in this country rewarded the borrower at the expense of the lender.

Now in a deflationary period, the lender is rewarded, or is victimizing the borrower—or rather the Government is causing windfall profits at the expense of the borrower.

Senator **Symms**. The savers now are benefiting and the borrowers are hurting. I happen to be a borrower so I personally know.

Representative **Kemp**. Hopefully, we want to encourage savings but we don't want to punish borrowing. We don't want to punish consumption and we certainly don't want to punish production.

Senator **Symms**. Let's go back to your recommendation. We're going to get on the gold standard.

Representative **Kemp**. Well, my recommendation is that we immediately move from a quantity rule, M_1 supply rule, to a more utilitarian rule around which the price of gold would be used as a proxy to gage the general price level.

You asked about 1971. In 1979, when Volcker came in, the price of gold was $350 an ounce. It went up to $835 an ounce. We were inflating. We were buying too many bonds through the open market committee. We were injecting too many reserves into the system. You can tell that because the price of gold and commodity prices went up.

Then we went into a deflation. They had to tighten, if you will. They had to sell bonds, but they overcompensated. They went way down and the price of gold went from $830 to $299 and we've had a very severe recession. Now the price of gold is back to $350. Now I don't know where the price of gold should be, but I think you could at least recognize that there is a little bit more price stability at the moment, interest rates started to moderate, short-term rates came down a little bit. There's been a little increase in the stock market and a modicum of economic recovery.

I am saying that we should be very careful what we do right now and we should not try to narrowly target M_1 because we can shut off the liquidity and the cash needs in this economy.

Senator SYMMS. One of my concerns about your recommendation, frankly, is that as long as we have this built-in growth automatically built into the Federal budget so that we are going to have the problem of either printing the money, borrowing the money, or taxing for it to cover these Government expenditures that are built into the system, if we some way link the dollar back to gold, then it's going to shatter the confidence that people ordinarily have in gold. Then you have a worse situation than you have now.

Representative KEMP. Why would it shatter confidence in gold?

Senator SYMMS. Well, because if credit was too tight and you tried to artificially set the price out there and then you come back in and you have, say, we have to change the price this month to $400 instead of $350——

Representative KEMP. The market would set the price.

Senator SYMMS. How are you going to let that happen?

Representative KEMP. The market is setting the price right now. You're not trying to fix the market. You're just trying to stabilize the general price level by conducting your monetary policy around a different rule, and it wouldn't shatter the confidence in gold. Conversely, it would increase the confidence in monetary policy and then fiscal policy—I agree with Mr. Richmond at least on one side of this equation—I would cut spending. I just wouldn't raise taxes.

The problem is the American people are overtaxed, not undertaxed, and raising taxes at this point in the economy could very well do what Mr. Hoover did—throw us into a deep depression.

Senator SYMMS. Well, let's go back to what happened to our gold stocks after 1971. What are they doing for us now?

Representative KEMP. The gold stock is not—we have about 8,000 tons of gold. It isn't necessary to worry about the gold stock, per se. The whole purpose of a gold standard is never to have to use it. You're basically using it as a proxy.

Senator SYMMS. Before 1971 we would have had a flight into gold.

Representative KEMP. Not if we had conducted sound monetary policy. I submit to you, Senator—this is very important and I apologize for driving this home or trying to drive it home. Mr. Reynolds can give you a better answer to your question. But as far as I can tell in reading history of monetary-fiscal policy since 1968, when I came into office in 1970, the administration made a conscious, articulate decision to try to compete with the Japanese by devaluing the U.S. dollar on purpose and they announced the devaluation and all of a sudden the announcement of a devaluation by the U.S. Senate and the

U.S. Government caused a flight into gold and the demand for gold in the central banks of the United States forced a panic at Treasury and they decided to suspend the convertibility of the dollar and thus——

Senator SYMMS. That's my point.

Representative KEMP. But they didn't need to, my point is, Senator. They didn't need to do that. If they had conducted sound monetary and fiscal policy, they wouldn't have raised taxes, they would have cut spending, and they wouldn't have suspended the convertibility of the dollar and they would have conducted sound monetary policy and we could compete with Japan by changing our tax and regulatory code.

Senator SYMMS. I'm losing a little confidence in whether the administration is going to come down here and recommend an approach to extend people's economic horizons to give more confidence and get a dollar, as you say, that's as good as gold.

How about if the Congress would—what would you think of the proposition if we take this gold reserve we have at Fort Knox, that's sitting there idly, and mortgage it so we could sell bonds for long term to finance this trillion dollar debt at a lower interest rate and have gold-backed bonds and sell them on Monday instead of short-term Treasury bills?

Representative KEMP. That's not a good idea. It would be basically a zero sum, I would say to my good friend from Idaho. It would lower interest rates on those bonds. It wouldn't do anything for the confidence in the long-term bond market and it wouldn't do anything to change the conduct of monetary policy which has caused the problem in the first place. But you can ask that question of Mr. Reynolds again.

Senator SYMMS. But now you've got one of the captains of industry; in addition to being a Congressman, Fred Richmond is what they call a captain of industry, and he speaks for a lot of people on Wall Street that are concerned about the growing deficit. Now if you can sell the Treasury bills for 6 percent on Monday instead of 13 or 12 percent or what they're selling for, our interest rate would be cut down considerably and we would have a budget that the deficits would narrow and it would restore some optimism in the market.

Now I agree with what you are saying in 5, 10, 12, or 15 years they're going to——

Representative KEMP. No, immediately; it would lower the bond rate. It would lower the interest rate for those bonds, but it wouldn't do anything (a) to conduct sound monetary policy and (b) it wouldn't do anything to encourage the long-term bond market for other forms of borrowing. So it's too gimmicky.

The problem is, Steve, the monetary policy is flawed and you should direct your intellectual capital at the source of the problem and not divert it by just trying to lower the interest rates. That's credit allocation, in effect. That's a form of credit allocation and you oppose that.

Senator SYMMS. Our fiscal policy is out of whack too because we are still spending at a rate faster than we—we have a choice. Volcker has a choice, either print money or borrow money right now.

Representative RICHMOND. Both of which are inflationary.

Representative KEMP. I don't think Volcker has any choice. Given the rule that he's following, he has no choice. He isn't really following any other rule—maybe he's sneaking a peek at the commodity price index and maybe he's peeking out the side of his eye peripherally at gold, but basically, the announced target of 2.5 to 5 percent growth in M_{1B} or M_1 is his sole target and when it's rising he starts selling, and when it falls he starts buying; and what we're saying here today is that that's so totally arbitrary—it's a fiat currency, I would say to my friend who understands fiat currency inflations in the past, and we're seeing the breakdown, or we have seen the breakdown not only in the greenback and the continental and the fiat currency of France and the reichmark in Germany, but we've seen the market reject paper currencies every time they've been tried in the history of mankind. So the market is rejecting a currency that it does not trust. And you can call it archaic or not, but the lesson of history is clear. Every nation that follows a paper standard, ultimately, in one form or another, is forced by the rule or the rocks to come back to morality and sanity and honest, hard fiduciary reality.

Senator SYMMS. Well, Mr. Chairman, I apologize for going past my time.

Mr. Kemp, this is really an excellent statement. I'm going to take it over and put it in the Congressional Record so more people can read it either today or tomorrow, but I want to ask one more question if I can without imposing on my time, and I see we have a rollcall on the floor.

There are two bills that are introduced in the Senate and I think there are several in the House that would address this question. Do you have one particular legislative proposition in mind that you favor more than others? In the Senate, we have the Helms bill which myself and Senator McClure and Senator Laxalt I believe cosponsor, and then I have introduced a bill that is the one where you use the freedom of choice on redemption of gold coins back and forth so the Fed would have to compete with gold. But which one of these are you talking about, or do you have a bill introduced that you like?

Representative KEMP. Basically, I think that money is an executive branch responsibility. That doesn't mean that we don't have a responsibility to raise our voices and try to introduce legislation. I commend you for your efforts, and Mr. Jepsen. Senator Helms has a very good bill. I think you cosponsored it. Really, as far as I'm concerned, that is a good legislative approach. I would prefer, rather than diverting the attention to the long-run legislative possibilities of changing monetary policy, I would rather convert the administration and the Fed to a sound money policy. To me, that's the margin right now in trying to get across to monetary authorities at Treasury and the——

Senator SYMMS. Can they do that without legislation?

Representative KEMP. Yes, I think they can. I think we can stop this—right now the administration is defending the monetary policies of the Fed. I think therein lies part of the problem. I think Paul Volcker would like to change. I really do. I think he is recognizing that he can't control the supply of money because he doesn't control the demand for money. Representative Barber Conable and I had lunch with him about a month ago and he said, "Jack, you're right; there is no way to control the demand for money." And he made that statement at a breakfast that I had with him. I think he's a very decent person and wants to do a good job, but I think he probably is keeping an eye out on the commodity price index and I think the administration could have a direct change in policy.

Senator **Symms**. The fact of it is, our tax bill has had a bias toward high interest rates over the years too because, when these corporations really get squeezed for money and they're already in debt, they have no choice but to borrow more and they pay whatever the market asks and a guy goes out to borrow a billion dollars to keep themselves going and the interest on it, they finance it by lower taxes.

Representative **Kemp**. Yes, sir. I couldn't agree with you more. That's why I think this tax bill—I know it's heresy—but I think it's a bad bill. It removes about 65 percent of the capital formation aspects of the 1981 tax bill. This is no time to be raising taxes.

Senator **Symms**. Maybe those of you will take care of that in the House.

Representative **Kemp**. I know the gentleman from Idaho——

Senator **Symms**. Is feeling pretty sick. [Laughter.]

Senator **Jepsen**. Congressman, thank you very, very much.

Representative **Kemp**. I appreciate your tolerance.

Senator **Jepsen**. This has been very informative and enjoyable.

This hearing will stand at ease until the call of the gavel, which will be in about 5 minutes, while we go over quickly to vote. Then we will hear from the panel at that time.

[A brief recess was taken.]

Senator **Jepsen**. The Subcommittee on Monetary and Fiscal Policy will come to order.

The Chair would like to welcome Messrs. Bob Genetski, Alan Reynolds, and David Raboy. We will proceed with Mr. Genetski.

STATEMENT OF ROBERT J. GENETSKI, VICE PRESIDENT AND CHIEF ECONOMIST, HARRIS TRUST AND SAVINGS BANK, CHICAGO, ILL.

Mr. **Genetski**. Thank you, Mr. Chairman. I'm Robert Genetski of Chicago Harris Trust and Savings Bank and I appear today at the invitation of the subcommittee to present my views on current Federal Reserve policies and alternatives to those policies. It's my belief that the conduct of monetary policy since October 1979 has been disappointing and that action is needed to restore the public's confidence and reduce the risk of further financial distress.

ALTERNATIVES TO CURRENT FEDERAL RESERVE POLICY

I believe the monetary policy that currently threatens the economy is neither the highly restrictive policy of the early 1930's nor the highly expansive policies of the late 1970's. Rather, the current threat lies in the highly erratic and unpredictable nature of the policy that began in October 1979. This policy has increased interest rates substantially and sent the economy into a serious recession.

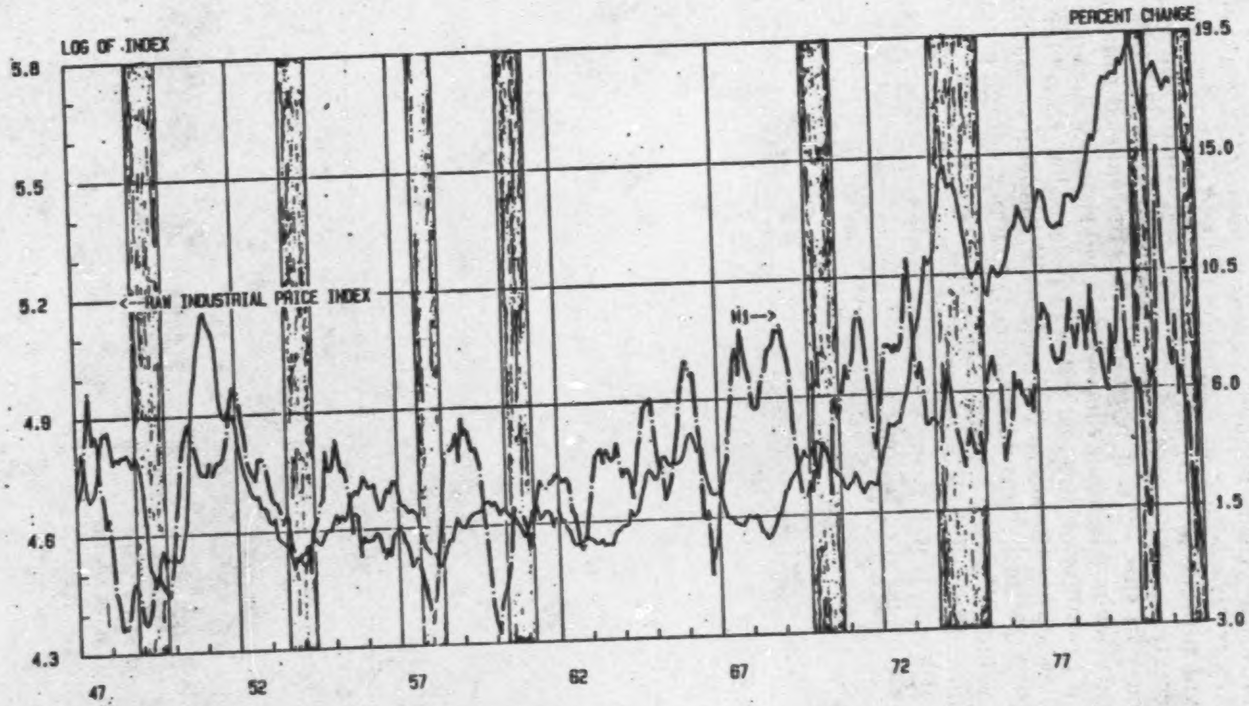
There is currently a widespread view that interest rates are high because of concern that the Federal Reserve will not continue its anti-inflationary policy. This is only part of the answer. At present, market participants are almost as concerned that monetary policies will be too restrictive as too expansive. This condition has led to a monetary gridlock whereby the Federal Reserve is left with nothing but poor alternatives concerning the next move on money growth. When it engineers a highly restrictive policy, as it appears to have done since January, a fear of bankruptcies and illiquidity pervades financial markets. When the Fed creates money rapidly, as it did toward the end of 1981 and into January of this year, it reignites fears of renewed inflation.

The erratic swings in money have increased risk and uncertainty and provided a premium on interest rates to reflect that risk. Our own research indicates that the enormous increase in monetary volatility since October 1979 has added anywhere from 4 to 6 percentage points to interest rates, and I have a chart that I would like to include in the record that shows that relationship.

Senator JEPSEN. It will be entered in the record.

[The chart referred to follows:]

M1 AND LOG OF RAW INDUSTRIAL PRICE INDEX



M1 is defined as currency and all checkable deposits. Data are seasonally adjusted six-month compound annual rates of change.

Raw Industrial Price Index is an index of 13 raw industrial commodities calculated by the Bureau of Labor Statistics.

Source: Board of Governors of the Federal Reserve System; Department of Commerce, Bureau of Labor Statistics

Mr. Genetski. Many observers believe that if the Federal Reserve adheres to its present policy and produces monetary growth which, on average, is within their targets, interest rates will eventually come down. They are right. Eventually, lower inflation will bring interest rates down. As debtors become disappointed at having to pay these very high real rates and savers are more than satisfied with their returns, debt will be curtailed and savings will be increased. Unfortunately, no one knows how long this process will take. If it turns out to take several years instead of several months, it will increase the risks of bankruptcies and economic dislocation in the period ahead.

In order to bring interest rates down permanently, market participants must have a reason to believe that future monetary policies will be pursued in a stable and predictable manner over an extended period of time. The ideal way to do this is to establish a record of slow, steady monetary growth for an extended period of time. In this regard, it is important to note that whenever month-to-month swings in the money supply have moderated, interest ratess have declined. Our analysis shows that recently, the volatility of money has been reduced. This should help to reduce interest rates this quarter. Incidentally, this testimony and this analysis was completed before the recent drop in interest rates which, at least so far, does appear to confirm what we have suggested. Moreover, if monetary volatility were to remain low in the period ahead, our analysis indicates that interest rates would be significantly lower by yearend.

Unfortunately, there is little assurance that monetary growth will remain stable. And, even if the Federal Reserve were to provide more stable growth in the period immediately ahead, there would be little assurance that the stability would continue as political and economic pressures shift over time.

An alternative to waiting and hoping that interest rates fall fast enough to avoid further financial and economic problems is to provide greater assurance that future monetary policies will be conducted in a stable, consistent, and predictable manner.

To achieve these objectives, I believe monetary policy should be directed toward a price rule for money. Such a rule would use the market information present in movements of sensitive commodity prices as a guide toward adjusting monetary policy. The chart also shows the behavior of an index of 13 raw industrial commodity prices and the money supply since 1947. The industrial commodity price index, which incidentally was produced by the Bureau of Labor Statistics up to about a year ago, is currently maintained by the Commodity Research Bureau. Although this index may be the best one presently available to use as a guide for monetary policy, it is likely that a superior index could be developed specifically for such a purpose.

The behavior of the BLS index of sensitive commodity prices since 1947, as well as an analysis of the price behavior of eight individual nonagricultural commodities since World War I, suggests the following preliminary conclusions:

One, commodity prices tend to respond, with a lag, to changes in the money supply. The use of extremely sensitive prices which are highly responsive to economic circumstances, tend to lag changes in money by several months. This relatively short lag is crucial for implementing a change in monetary policy quickly enough to provide a stabilizing influence on both money and the economy. The use of less responsive price indexes as a guide for monetary policy holds the potential to aggravate swings in the money supply and therefore increase the volatility of short-run economic performance.

Two, the lags between chances in commodity prices and money tend to be shorter at business cycle peaks than at troughs. This suggests that a relatively early signal would be given for monetary ease when a recession begins, and that signals of monetary ease would continue into the early stages of a recovery.

Three, prices of specific commodities can behave very differently from a basket of commodities. As such, the use of the price of one commodity—and I would add, such as gold—as a guide toward policy holds the potential to aggravate swings in the money supply and thereby increase economic instability.

Four, minor recessions and limited inflationary cycles would not necessarily have been avoided with a price rule for money.

Five, a price rule for money performs worst at the culmination of a highly inflationary period when its signals for monetary restraint would encourage a highly restrictive monetary policy. However, since chronic inflationary problems could not occur under a price rule, this potential shortcoming is only relevant if a price rule for money were to be considered in the final stages of an inflationary cycle.

Six, and most important of all, a price rule would have prevented the highly restrictive shifts in monetary growth that characterized every major recession since 1915. As such, it is likely that such a guide would have enabled the U.S. economy to avoid all major recessions since that time, including the present one.

In light of these conclusions, I would like to suggest the following recommendations, which are designed to move the conduct of monetary policy toward a price rule while minimizing the potential for short-term economic instability:

First, abandon the present concept of monetary targets. The concept of an annual target range, as presently followed, serves to encourage monetary volatility, promote confusion over monetary policy, and raise interest rates. While slow, steady monetary growth would be the most desirable policy for promoting both stable business conditions and low interest rates, the failure to achieve such a policy over the past few years raises serious questions concerning stable growth in the future. And, even if stable growth were to be achieved in the period immediately ahead, there is little assurance that such a policy would be maintained as personalities, philosophies, and political pressures change.

Second, in place of targets, the Federal Reserve should be permitted a monthly range of discretion regarding the creation of money. I would recommend a range of $0–$1 billion in terms of the St. Louis monetary base. The Fed would be permitted to conduct monetary policies in any way it deemed appropriate on a day-to-day or week-to-week basis, but its activities would be constrained by this appropriate range of discretion.

And third, and most important of all, the range of discretion should change automatically in response to changes in an index of sensitive commodity prices. Specified percentage increases in the index would be viewed as a signal that inflationary pressures were building and would lead to a progressive lowering of the monthly range of discretion, while specified decreases in the index would lead to progressive increases in the range.

It is my belief that adoption of these recommendations would help restore confidence in future monetary policies, and produce a lasting downward movement in interest rates. Apart from the favorable impact of these changes on our present economic situation, implementation of these procedures would provide a self-correcting mechanism which would help to avoid the types of major recessions and inflationary cycles that have inflicted so much pain and suffering on our predecessors, our fellow citizens today, and that threatens our children to a similar fate. Thank you, Senator.

Senator JEPSEN. Thank you, Mr. Genetski. The Chair has been advised that Congresswoman Heckler does have another meeting and will not be able to stay for all the hearing so she will be asking her questions at this time and you may proceed, Congresswoman.

Representative HECKLER. Thank you very much, Senator, and I apologize to the panel for this intrusion, but the subject is so important and of such magnitude that I asked for special consideration.

Mr. Genetski, in your testimony you say, "Slow, steady, monetary growth would be the most desirable policy for promoting stable business conditions and low interest rates," yet you reject using a quantity rule to achieve slow, steady, monetary growth. You appear to blame the fact that targets are set for what you call a failure to achieve such a slow, steady, policy.

Why don't you blame the Federal Reserve Board for failing to meet its own targets? Why can't we legislate a slow, steady, monetary growth rule, allow the President to remove the Chairman of the Federal Reserve and the other governors if they provide fast or volatile monetary growth? We have gone through so many zigzag policies that we all seem to have the same goals but we cannot seem to agree on the means of achieving them.

Mr. GENETSKI. Well, it's a very good question. As you discerned, I have tried to split the difference between what I believe is really a desirable policy, perhaps the most desirable—slow, steady increases in the money supply—with more of a guarantee that in fact if we ever get out of whack, because honest mistakes are made with respect to what measure of money to look at or what interest rates to follow, that there's an automatic mechanism people can rely on to cause us to get back on track. And the political process whereby a President may be very happy with the fact that the Chairman of the Fed is printing a lot of money or a very little bit of money does not provide us that guarantee. It has not right up to the current period, provided us the sort of guarantee against these very dramatic swings in the economy.

And so, you're right, there is a kind of splitting the difference between monetarism, which I believe in—I believe that the changes in the money supply are really causing the commodity and gold prices to change—and trying to get at some sort of a rule that gets us back to a self-correcting mechanism. I believe that there can be legitimate arguments over which measure of money is the appropriate one. I think the arguments are very much overstated. I believe the Federal Reserve could do a far better job in controlling money. And I question people at the Fed specifically as to why you poured all this money in at this point of time. The answer that they have given me, at least on one occasion, is that they wanted to prevent interest rates from going up to 30 percent, which tells me that they're not really attempting slow, steady monetary growth. But I believe that they have a lot of excuses that they can bring up, some of which are legitimate, which can get them out of the congressional mandate that they pursue policies of slow, steady monetary growth.

So I would like to see something independent of the judgment of who happens to be in there at the time and independent of the political pressures that are on the system, to try and self-correct for a situation where we start to get out of hand.

Representative **Heckler.** If I might ask Mr. Raboy to respond to the same question.

Mr. **Raboy.** I totally agree with you, Representative Heckler, and I think there is a way that it can be done and this is relatively an age-old suggestion. Back in the 1970's, certain monetarists were advocating certain methodology for guaranteed steady growth rate in the M_1 money supply.

The Fed cannot directly control M_1, but it can control something called the monetary base, which is liabilities against the Fed and outstanding currency, and back in the 1970's it was suggested that the best way to guarantee a steady growth rate in M_1 was to set a rate for the monetary base, give instructions as to the rate of growth, and allow the monetary base to grow at the rate of 2 percent. But the empirical evidence was that, lo and behold, if such a measure were undertaken, that the money supply itself would converge at the same growth rate.

So what I would advocate is exactly that, by statute, the Congress set a rule that the Federal Reserve set a growth rate in the monetary base, which they can control, and they stick to it; and if they don't stick to it, they are dismissed.

Mr. **Genetski.** Would it be possible for me just to respond to that?

Representative **Heckler.** Yes, I would be happy for you to because I think this is central.

Mr. **Genetski.** It is very central and on most occasions, I would say 90 percent of the time, it's true that the monetary base and the money supply do tend to grow at the same rates. As a matter of fact, we use both as confirmation that that is in fact what the Fed is doing. There have been some very dramatic cases where the monetary base has not grown in line with the money supply, the most dramatic being the Great Depression. In the first 3 years of the 1930's, the monetary base increased and because people were holding more currency as opposed to putting their money in banks, you had some very sharp declines in the money supply. A computer rule which targeted the monetary base during the first 3 years of the 1930's would not, in my reading of history, have prevented the Great Depression from occurring.

However, as the economy weakened, commodity prices virtually collapsed. This, in my mind, looks like a much better rule to avoid very serious recession. For the other 90 percent of the time, that sort of rule where the monetary base is legislated would have done very well. But I believe our main concern should be avoiding those very major cycles of both inflation and recession.

Representative **Heckler.** Knowing that my colleague from the Senate would never be supportive of anything that would create any havoc with commodity prices in the agricultural sector of the economy which he protects so valiantly and serves all Americans in that regard, Mr. Chairman, having said such good things about you, may I be indulged in one more question?

Senator **Jepsen**. Please do.

Representative **Heckler**. And they are sincere nevertheless.

I would like to ask about the focus on the monetary base versus M_1. That seems to be a central point that you've made. What are the benefits of that and what are the risks? Everyone now is focusing on M_1, it seems to me.

Mr. **Genetski**. My reading of the monetary situation is that the M_1 measure tends to be a better measure over time, tends to be more closely related to, first of all, economic performance and, second of all, the rate of inflation, than the monetary base.

As I say, 90 percent of the time it doesn't make any difference, but when the two deviate, as they did during the depression, as they did very briefly in the 1974–75 recession, and as I might add, as they have recently over the past 6 months, I have always in terms of anticipating what might happen next to the economy looked at the M_1 figure. In fact, I would disagree with Congressman Kemp's testimony in this respect. It appears to me—and I follow these figures very closely—that the relationship between changes in M_1 and changes in the economy has been far better in the past 10 years than it was when we were under the Bretton Woods system. It has worked extremely well for us in anticipating the next move of the economy and it worked well, incidentally, right up to the current time period when the weakness in M_1 since January suggested that we were not going to take off at a rapid recovery but, rather, there would be a temporary lull before recovery actually began.

Representative **Heckler**. Mr. Raboy, would you like to comment?

Mr. **Raboy**. Sure. I think there are two basic questions when you try to choose a target for the Federal Reserve to follow. One is, what can the Fed control; and two is, the question of predictability.

It is true that M_1 is a somewhat better predictor of nominal economic activity that the base, although I have seen some empirical results that suggest that the base is not bad.

In terms of the relationship between the two, in my prepared statement is a chart that tracks the relationship between the monetary base and M_1 from the period 1971 to 1982. The effective relationship that you see is as follows: When motion in the base is relatively dampened—in other words, it's relatively steady—motion in M_1 is relatively stable as well. When you start getting wild gyrations around the base, which I can only attribute to conscious decisions on the base, you also get wild gyrations around M_1. In fact, they are even more pronounced.

Yes, there are times in history where the linkage is broken. I think a lot of those times the linkage was broken because of specific volatility on the part of Federal Reserve behavior. But any rule can have an escape clause. Certainly if we see the linkage being broken, the Fed then can have certain discretionary powers, but the trick is to limit that discretion as much as possible. For that 90 percent of the time when the rule works, fine. Allow some discretion so the Fed can escape if the linkage is broken.

Representative **Heckler**. Then I'd like to ask one final and very simplistic question. It has a point, because in this society we constantly hear about Reaganomics. In spite of the fact that reduction of the cost of Government has lowered inflation and in spite of the fact that there are many valuable and indeed, overdue aspects of the tax policy which the President supported, we hear so many who say that the slow economy is the result of Reaganomics, and then others who say the reason the tax policy can't work is because Reaganomics prevent that, creating in my mind the possibility of Volkernomics.

On a scale of 1 to 10, how would you rate the performance of the Federal Reserve Board during this period?

Mr. **Raboy**. With respect to the average rate of growth, pretty well, but Milton Friedman points out that a 6-foot man can drown in a river that averages 3 feet depth. In terms of volatility they have not done well at all and I think we are beginning to realize that volatility is as much a problem as the absolute level of money. I think we may very well attribute 2 to 4 percentage points in existing interest rates solely to Federal Reserve volatility.

Representative **Heckler**. Two to 4 points?

Mr. **Raboy**. Yes.

Representative **Heckler**. So on a 1 to 10 scale, where would they be?

Mr. **Raboy**. The Federal Reserve, four and one-half.

Representative **Heckler**. Mr. Genetski.

Mr. **Genetski**. What's high and what's low?

Representative **Heckler**. One to 10. Ten is excellent.

Mr. **Genetski**. Ten is good?

Representative **Heckler**. Ten is the ideal.

Mr. **Genetski**. OK. And one is the worst?

Representative **Heckler**. Yes.

Mr. **Genetski**. Well, under those constraints, I would rate the policy as a one.

Representative **Heckler**. A one?

Mr. **Genetski**. That's right. I believe—can I just say one other statement with respect to your comment regarding taxes and Reaganomics? I believe that short term, the key factor influencing the economy in terms of the swings one way or another are not the taxes, are not the Government spending, but, rather, the swings in the money supply. Whenwe have volatile swings in the money supply, we have very volatile economic performance.

Long term, however, I believe the most important factors affecting the economy are in fact the tax rates and the fact that tax rates were high in some of the studies that we did suggested that that was the main reason that the economy had been languishing for several years, with falling real income. Again, according to our analysis, the first cut in tax rates that occurred this month—and that cut is a fairly modest cut, but it is a cut that I believe is going to help the economy to recover. My only objection with respect to tax policy is, first of all, it wasn't done in sufficient quantity quickly enough to get the economy moving in the right direction.

Representative **Heckler**. I would agree with that.

Mr. **Genetski**. And second, we are currently seeing an unbelievable situation, which 50 years ago in 1932, Congress, when the economy was in the midst of a very serious recession, argued that they had to actually raise taxes because of the fact that the Federal budget deficit was so large. It was $2 billion incidentally in 1932, which doesn't sound large now, but relative to the size of the economy was close to the equivalent of a $100 billion deficit today.

Representative **Heckler**. What year was that?

Mr. **Genetski**. 1932. Congress went ahead in 1932 because of the arguments of crowding out of private creditors and gave us the largest tax increase up to that point in history, and the end result, I believe, was to help make the serious recession at that time turn into the Great Depression. And I'm very seriously concerned about the tax policies that are currently under consideration, not in terms of what's going to happen to the economy today or next month or a couple months from now, but the longer term perspective.

Representative **Heckler**. Mr. Reynolds, I didn't mean to ignore you, but I don't want to take too much time and you have your statement to present, but on a scale of 1 to 10, how would you rate the Federal Reserve's performance?

Mr. **Reynolds**. Well, I think the Federal Reserve is pursuing the wrong targets with the wrong tools and under those circumstances it's a little hard to judge their performance. They've been mandated to pursue those targets.

Representative **Heckler**. Maybe they're off the scale.

Mr. **Reynolds**. I think Congress bears some responsibility for mandating them to pursue the M_1 targets. They pursued them very poorly, to be sure, but that's part of the problem. I prefer not to engage in that exercise. I think second-guessing the Fed is an unwholesome activity.

Representative **Heckler**. Unfortunately, it's one of our requirements it would seem to me—not second-guessing, but analyzing it because we don't interact effectively with them. We're part of the problem, not part of the solution.

Mr. Chairman, I thank you very much and I appreciate your comments.

Senator **Jepsen**. Thank you, Congresswoman Heckler.

I would now note that all of the statements that were offered here will be entered into the record as if read in their entirety, so you may proceed in any way you so wish, Mr. Reynolds.

STATEMENT OF ALAN REYNOLDS, VICE PRESIDENT AND CHIEF ECONOMIST, POLYCONOMICS, INC., MORRISTOWN, N.J.

Mr. **Reynolds**. Thank you, Mr. Chairman. I'm Alan Reynolds with Polyconomics, Inc., in Morristown, N.J.

The only attainable objective of monetary policy is to provide a dollar that holds its value reasonably well over both months and decades—a predictable unit of account. Interest rates of quantities of money are not ultimate objectives, but are instead intermediate targets whose utility depends on their relationship to price stability.

At the level of policy advice, "monetarism" is popularly understood as the proposal to literally ignore prices, interest rates, and exchange rates, and to instead focus monetary tools exclusively on nominal quantities of specific liquid assets. The rationale for this policy requires a sufficiently precise link between some controllable measure of money and some index of prices. In order to estimate the right amount of money for the next month or year, for example, it would be necessary to predict the future multiplier between bank reserves and M_1, the velocity between M_1 and nominal GNP, and the division of GNP between real output and price. This is an extremely roundabout process which has the unfortunate characteristic of being impossible.

I have a table in my prepared statement that shows the linkage between annual changes of M_1 and prices in several countries has been virtually invisible, regardless of any reasonable lags.

I will suggest that the appropriate target for monetary policy can be more directly related to its ultimate objective, namely price stability. The question of which price or prices to stabilize is secondary to this basic issue.

It is misleading to translate a price rule into quantities of money. I am not making any assertion whatsoever about whether there should be more or less money, higher or lower interest rates. Instead, I am proposing an alternative method of answering that question.

Robert Hall, chief inflation researcher for the National Bureau of Economic Research, has stated the difference quite well:

> The commodity standard stabilizes prices by providing a definition of the dollar in terms of real economic quantities. In this respect it differs sharply from the current system where the dollar is defined as a piece of paper whose value comes only from a scarcity created by the Government.

In "The Theory of Money," Jurg Niehans of Johns Hopkins likewise notes that in order to provide a stable unit of account, even with inconvertible money:

> All the Government has to do is to supply the token money at such a rate that the price of the optimal money commodity is constant over time.

The only task is then to select the optimal commodity or commodities.

If this idea must be translated into monetarist categories, it means the combined change in both money and velocity, less the change in real output, should equal zero. That is just another way of saying that monetary policy should aim at stable prices.

It is not feasible to control both quantity and price. If prices are stabilized, the supply of money must be free to vary with demand. That is, the supply of money would be whatever people were willing to hold at stable prices. Growth of money could not be unstable unless the demand for money was unstable; it could not be excessive or inadequate because that would make prices rise or fall.

If both current and future prices were expected to be stabilized, then interest rates would be low and stable, because an interest rate is the current price of a future dollar.

The Nation's creditworthiness has been seriously eroded over the past 15 years. Reviving the long-term financial markets requires a binding long-term plan to commit monetary authorities to price stability. At the same time, however, the system must be sufficiently flexible to accommodate sudden shifts in the demand for various forms of money, such as a shift from money market funds into insured deposits with higher reserve requirements.

Attempts to control the quantity of money provide neither the long-term guarantee nor the short-term flexibility. The definition of money is arbitrary and in flux, making predictable long-term rule impossible.

To the extent that some M could be held to a rigid path, short-term gyrations in its velocity must necessarily be reflected in comparable swings in prices and output. There is nothing else to change. This is not a minor difficulty, as Congressman Kemp pointed out, since the income velocity of M_1 rose at a 13-percent rate in the first quarter of 1981 and fell at a 10-percent rate in the first quarter of 1982.

The monetarist objection to stabilizing interest rates has always been that the Fed did not let rates rise rapidly enough as inflation accelerated, nor let them fall enough in recession. When rates were too low, it became profitable to buy on credit before prices went up, thus fueling more inflation. When rates were too high, that caused a liquidity crunch that forced distress sales of commodities and assets to keep the bills paid.

This was and is a valid criticism, because the Fed still sets monthly interest rate targets, and never fails to hit them. The overnight Fed funds rate does not depend on concerns about future inflation—that rate is high mainly because the Fed deliberately keeps it high to discourage holding M_1 balances. The Fed moved its interest rate targets around more rapidly in 1980 and 1981, but its critics then decided that such movement is what kept interest rates high. Instead of emphasizing monetary trends in the money growth, they started talking about the short-term gyrations. I believe the problems are more fundamental than that.

The simple rules-of-thumb that guide monetary policy simply do not provide enough information. Would annual growth of 3.4 percent in the monetary base assure price stability? It did not do so from 1929 to 1933. Would a gradual reduction of M_1 growth over several years keep inflation down? It has not done so in Canada. Would cutting the discount rate in half make bond yields rise? That certainly has not happened in Japan where rates are half what they are here. The honest answer to such questions is "nobody knows" or "it depends." The only certainty is that the Fed's targets for M_1 and interest rates will prove to be too high or too low. The Nation will attain price stability only at those times that we pass from deflation to inflation and back again.

Any attempt to treat either interest rates or the quantity of money as ultimate goals will always result in alternating periods of robbing lenders with inflation, then bankrupting borrowers with deflation. The reason is that nobody can possibly know either the interest rate or money supply that is consistent with price stability without monitoring some price, or fixing the value of the dollar in terms of some good. If someone proposed keeping, say, the entire producer price index from either rising or falling, it would be difficult to accuse him of suggesting a stop-go policy, countercyclical fine-tuning, renewed inflation, or price-fixing. In fact, such accusations are nonetheless common from an economics profession that can contemplate no alternatives to inflation, but deflation and vice versa. By definition, stability means stability. Producer prices of everything but food were falling from February through May. It is a euphemism to call that "disinflation." But I am equally concerned to stop any upward trend in prices—forever.

The controversy arises only because I believe it is sufficient and more practical to stabilize the dollar in terms of one commodity—gold—or an index of a few commodities that are relatively insensitive to supply disturbances. Broader indexes arrive too late, they are troubled by discounts, quality changes, seasonal adjustments, mortgage rates, labor contracts, and so forth. Ample evidence from Joel Popkin, Geoffrey Moore, and others shows that trends in commodity prices are invariably followed by comparable trends in broader measures of inflation or deflation. Only the broad indexes exhibit any rigidity or lags.

Robert Weintraub had noted that "commodity prices * * * move up and down with changes in M_{1B} growth almost immediately." Mr. Genetski just basically said the same thing. When that is true, and it often is, then neither could have any objection to using commodity prices as a monetary target, and I could have no objection to M_1. When M_1 is rising and commodities falling, however, as from October through January, that provides an early warning that people are holding more cash—velocity is falling.

Money buys goods and goods buy money. When people are dumping excess dollars to get goods, commodity prices rise—monetary policy is too loose. When people are dumping goods and assets to get cash, commodity prices fall—monetary policy is too tight.

Table 2 in my prepared statement illustrates three possible techniques for judging the tightness or ease of monetary policy. I include M_1, the Fed funds rate, and one convenient index of 13 industrial spot commodity prices. Using this particular price rule as an error signal, monetary policy was unambiguously loose from January 1972 through March 1974. The index rose 122 percent in that period, almost entirely before the oil shock. Monetary policy was clearly tight from August 1974 through January 1975—industrial commodity prices falling 21 percent. From 1978 to April 1979, there was another 35-percent rise in these prices, and we have the new inflation in the general indexes shortly thereafter.

Over the past few years the monthly ups and downs of M_1 and prices matched fairly well in the past 2 years, until last September. Since then, industrial commodity prices fell every month until late June, by 21 percent. I would argue that that indicated that monetary policy was unambiguously too restrictive.

Some decline in relative prices, particularly of inflation hedges, was probably inevitable if inflation was to be stopped. But a prolonged, broad based and deep decline in many prices was more than a wringing out of past excesses. Liquidating existing stocks of commodities and assets at falling prices did not make it easier to produce more at stable prices, which is what we're trying to accomplish. Indeed, it has squeezed profit margins of producers of primary products, worldwide, and raised future living costs by reducing wealth, by reducing the values of stocks, bonds, commodities, and real estate.

Some cyclical recovery in commodity prices is perhaps equally inevitable since many of these prices are now below marginal cost. They are being produced at a loss. No recovery has ever begun with falling commodity prices, which is why they are a leading indicator. There was, however, no systematic upward trend in this index during the 1975 recovery. The first clear signal of reflation, as in 1972–73, was the accelerating rise in gold prices that began in September 1976, rising another 20 percent in 1977, and 30 percent in 1978, and 119 percent in 1979. Similarly, the first sign of abrupt disinflation began with the falling gold price after September 1981.

Table 3 shows the transition from the deep recession in late 1974 to the recovery the following March. The huge increase in the budget deficit from an $8 billion to a $99 billion annual rate at this time obviously did not prevent interest rates from being cut in half, nor was the reduction of interest rates inconsistent with a dramatic reduction in inflation. The producer price index came down from 30 percent to 4 percent. Changes in M_1 or producer prices gave a very poor indication of what was actually going on in this period compared with the early fall in commodity prices that indicated the liquidity crunch and the subsequent stability that indicated recovery was on the way.

In his Newsweek column of October 16, 1982, Milton Friedman said the growth rates of M_1 and M_2, "have not been dangerously high." On September 23, 1974, Professor Friendman suggested that monetary growth was "still too high," as we were on the verge of a deep economic collapse. And then on March 10, 1975, roughly the date of the recovery, Professor Friedman argued that money growth was "undesirably low." Now using the prices of commodities as a guide instead would have provided the exact opposite conclusions at these times and have done so without the need for expert judgment.

The possible ways of implementing a price rule are as varied as ways of pursuing some quantity of money. Some favor stabilizing a commodity index first, then making the dollar convertible into gold. Others favor targeting the price of gold directly, then fixing it after a period of general price stability.

A price rule can easily supplement or supplant the Fed's current technique of getting at price stability indirectly through attempting to control or predict money, velocity and the volume of real transactions. A price rule simply says to ease when sensitive prices are falling and tighten when they rise. Gold could serve this purpose very well. As the Gold Commission report conceded, "the price of gold has also served as a good barometer of market anticipations of inflation."

Until gold is pegged, its price is not exactly a proxy for all prices, but is instead a proxy for excess demand for or supply of cash. People sell extra gold to get liquid, or sell extra cash to get gold.

Once the gold price is pegged, it becomes the Walrasian numeraire, which anchors the abstract unit, a dollar, to the universe of economic goods. Gold does not then have to be a proxy for all prices, because all prices are expressed in gold-equivalent units. This is less arbitrary than expressing prices in something called dollars that have no predictable link to anything. This is what the Constitution means about the congressional responsibility to regulate the value of money. Indeed, that passage in the Constitution occurs where Congress is also given the responsibility for fixing weights and measures.

As a modest first step, the Federal Reserve's reports to Congress could be required to demonstrate the relationship of monetary actions to various prompt and sensitive measures of price. Mr. Genetski's proposal would be relevant here. There could be a legislated permanent mandate to stabilize prices, with sanctions against failure.

One variation on a quantity rule might also be helpful. This would be to put a legal limit or prohibition on any additional monetization of Federal debt. That is, the Federal Reserve's holdings of Treasury and agency debt would be frozen or allowed to grow at only a modest rate. This is not as rigid as a permanent lid on the monetary base, because the Fed could buy other securities or use the discount window more actively during liquidity crises. The limit on monetization would, however, largely sever any supposed or feared link between future budget deficits and dishonest methods of financing them. Interest rates on bonds and mortgages would surely fall.

A legal limit on debt monetization would help Treasury financing, not hurt it. The Fed buys only a small portion of the Government's deficits and its profits on that debt are a small share of the revenues. The threat of excess monetization, however, raises the inflation premium in interest rates, and thus raises the Government's interest expense on the much, much larger volume of debt outstanding that is rolled over every 4 years.

A gold standard would, of course, accomplish this same purpose just as well. Indeed, the main reason that countries have gone back to gold has been to guarantee the principal of their loans and thus reduce debt service costs. The reduction in interest rates reduces budget deficits directly by reducing the Government's interest expense and also through the favorable effect on economic growth.

In 1980, before he grew allergic to gold, Prof. Herbert Stein proposed a one-sided and partial step toward a gold guarantee for the dollar: "One can hardly imagine a hyperinflation and all its attendant uncertainties going on," wrote Professor Stein—

> while the government honored a commitment to sell gold at a fixed price. Some version of gold standard may, therefore, be useful * * * to provide assurance that there is a limit beyond which inflation will not go. This function does not, however, require a continuous tight link between the quantity of money and the quantity of gold. The purpose could be achieved by a commitment to sell gold at a fixed price, the government remaining free to manage monetary policy by whatever rules or lack of rules it chose, so long as it protects its ability to honor that commitment.

The only problem with the Stein plan is that it does not contain comparable protection against deflation, which requires a parallel commitment to buy gold at a fixed price. When you do that you have a gold standard. It is, however, a magnificent step in the right direction, and I heartily endorse it.

The key questions about monetary policy are: First, should it operate by rules or whim? Second, must we try to stabilize prices by guessing what money, velocity, and real output will be, or can we focus directly on prices? That is, should monetary policy be judged by rough tools like M_1 or interest rates, or by results?

I do not pretend to have all the answers, but I do believe we have all been 10 years late in asking the right questions.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Reynolds follows:]

PREPARED STATEMENT OF ALAN REYNOLDS

The only attainable objective of monetary policy is to provide a dollar that holds its value reasonably well over both months and decades--a predictable unit of account. Interest rates or quantities of money are not ultimate objectives, but are instead intermediate targets whose utility depends on their relationship to price stability.

At the level of policy advice, "monetarism" is popularly understood as the proposal to literally ignore prices, interest rates and exchange rates, and to instead focus monetary tools exclusively on nominal quantities of specific liquid assets. The rationale for this policy requires a sufficiently precise link between some controllable measure of money and some index of prices. In order to estimate the right amount of money for the next month or year, for example, it would be necessary to predict the future multiplier between bank reserves and M1, the velocity between M1 and nominal GNP, and the division of GNP between real output and price. This is an extremely roundabout process which has the unfortunate characteristic of being impossible.

Table 1 indicates that the linkage between annual changes in M1 and prices in several countries has been virtually invisible, regardless of "lags".

I will suggest that the appropriate target for monetary policy can be more directly related to its ultimate objective,

Table 1

MONEY AND PRICES

	Japan		Germany		Canada		U.K.		Switzerland		U.S.	
	M1	CPI	M1	CPI	M1	CPI	M1	CPI	M1	CPI	M1	CPI
1978	10.8	3.8	13.4	2.8	10.0	9.0	20.2	8.3	12.6	0.8	8.2	7.7
1979	9.9	3.6	7.4	4.1	6.9	9.2	11.6	13.4	7.8	3.6	7.7	11.3
1980	0.8	8.0	2.4	5.5	6.3	10.1	4.8	18.0	- 5.4	4.1	6.3	13.5
1981	10.0	4.9	1.2	5.9	3.9	12.4	11.8	11.9	- 1.0	6.5	7.0	10.4

namely price stability. The question of which price or prices to stabilize is secondary to this basic issue.

It is misleading to translate a price rule into quantities of money. I am not making any assertion whatsoever about whether there should be more or less money, higher or lower interest rates. Instead, I am proposing an alternative method of answering that question.

Robert Hall, chief inflation researcher for the National Bureau of Economic Research, has stated the difference quite well:

> "The commodity standard stabilizes prices by providing a definition of the dollar in terms of real economic quantities. In this respect it differs sharply from the current system where the dollar is defined as a piece of paper whose value comes only from a scarcity created by the government."

In The Theory of Money, Jurg Niehans of Johns Hopkins likewise notes that in order to provide a stable unit of account, even with inconvertible money, "all the government has to do is to supply the token money at such a rate that the price of the optimal money commodity is constant over time." The only task is then to select the optimal commodity or commodities.

If this idea must be translated into monetarist categories, it means the combined change in both money and velocity, less the change in real output, should equal zero. That is just another way of saying that monetary policy should aim at stable prices.

It is not feasible to control both quantity and price. If prices are stabilized, the supply of money must be free to vary with demand. That is, the supply of money would be whatever people were willing to hold at stable prices. Growth of money could not be unstable unless the demand for money was unstable; it could not be excessive or inadequate because that would make prices rise or fall.

If both current and future prices were expected to be stabilized, then interest rates would be low and stable, because an interest rate is the current price of a future dollar.

The nation's creditworthiness has been seriously eroded over the past fifteen years. Reviving the long-term financial markets requires a binding long-term plan to commit monetary authorities to price stability. At the same time, however, the system must be sufficiently flexible to accommodate sudden shifts in the demand for various forms of money, such as a shift from money market funds into insured deposits with higher reserve requirements.

Attempts to control the quantity of money provide neither the long-term guarantee nor the short-term flexibility. The definition of money is arbitrary and in flux, making predictable long-term rules impossible. To the extent that some M could be held to a rigid path, short-term gyrations in its velocity must necessarily be reflected in comparable swings in prices and output. This is not a minor difficulty, since the income velocity of M1 rose at a 13% rate in the first quarter of 1981 and fell at a 10% rate in the first quarter of 1982.

The monetarist objection to stabilizing interest rates has always been that the Fed did not let rates rise rapidly enough as inflation accelerated, nor let them fall enough in recession. When rates were too low, it became profitable to buy on credit before prices went up, thus fueling more inflation. When rates were too high, that caused a liquidity crunch that forced distress sales of commodities and assets to keep the bills paid.

This was and is a valid criticism, because the Fed still sets monthly interest rate targets, and never fails to hit them. The overnight fed funds rate does not depend on concerns about future inflation--that rate is high mainly because the Fed deliberately keeps it high to discourage holding M1 balances. The Fed moved its interest rate targets around more rapidly in 1980 and 1981, but its critics then decided that such movement is what kept interest rates high. The problems are more fundamental.

The simple rules-of-thumb that guide monetary policy simply do not provide enough information. Would annual growth of 3.4% in the monetary base assure price stability? It did not do so from 1929 to 1933. Would a gradual reduction of M1 growth over several years keep inflation down? It has not done so in Canada. Would cutting the discount rate in half make bond yields rise? That certainly has not happened in Japan. The honest answer to such questions is "nobody knows" or "it depends". The only certainty is that the Fed's targets for M1 and interest rates will prove to be too high or too low. The nation will attain price stability only at those times that we pass from deflation to inflation and back again.

Any attempt to treat either interest rates or the quantity of money as ultimate goals will always result in alternating periods of robbing lenders with inflation, then bankrupting borrowers with deflation. The reason is that nobody can possibly know either the interest rate or money supply that is consistent with price stability without monitoring some price, or fixing the value of the dollar in terms of some goods.

If someone proposed keeping, say, the entire producer price index from either rising or falling, it would be difficult to accuse him of suggesting a "stop-go" policy, countercyclical fine-tuning, renewed inflation, or "price-fixing". In fact, such accusations are nonetheless common from an economics profession that can contemplate no alternatives to inflation but deflation and vice-versa. By definition, stability means stability. Producer prices of everything but food were falling from February through May. It is a euphemism to call that "disinflation". But I am equally concerned to stop any upward trend in prices--forever.

The controversy arises only because I believe it is sufficient and more practical to stabilize the dollar in terms of one commodity--gold--or an index of a few commodities that are relatively insensitive to supply disturbances. Broader indexes arrive too late, they are troubled by discounts, quality changes, seasonal adjustments, mortgage rates, labor contracts, etc. Ample evidence from Joel Popkin, Geoffrey Moore and others shows that trends in commodity prices are invariably followed by comparable trends in broader measures of inflation or deflation. Only the broad indexes exhibit any rigidity or "lags".

Robert Weintraub had noted that "commodity prices...move up and down with changes in M1B growth almost immediately." When that is true, and it often is, then he could have no logical objection to using commodity prices as a monetary target, and I could have no objection to M1. When M1 is rising and commodities falling, however, as from October through January, that provides an early warning that people are holding more cash--velocity is falling.

Money buys goods and goods buy money. When people are dumping excess dollars to get goods, commodity prices rise--monetary policy is too loose. When people are dumping goods and assets to get cash, commodity prices fall--monetary policy is too tight.

Table 2 illustrates three possible techniques for judging the tightness or ease of monetary policy--M1, the fed funds rate, and one convenient index of 13 industrial spot commodity prices. Using this particular price rule as an error signal, monetary policy was unambiguously loose from January 1972 through March 1974. The index rose 122% in that period, almost entirely before the "oil shock". Monetary policy was clearly very tight from August 1974 through January 1975--industrial

Table 2

Indicators of Monetary Policy

	Money Supply (M1)	Industrial Commodity Prices	Interest Rate (Fed Funds)
1970	3.8%	2.3%	7.2%
1971	6.8	- 6.0	4.7
1972	7.2	14.8	4.4
1973	7.3	40.7	8.7
1974	5.0	26.5	10.5
1975	4.7	-17.6	5.8
1976	5.7	11.3	5.0
1977	7.6	4.8	5.5
1978	8.2	9.8	7.9
1979	7.7	26.8	11.2
1980	6.3	17.1	13.4
1981	7.0	- 4.8	16.4
Jan.	0.8	- 2.3	19.1
Feb.	0.4	- 2.5	15.9
Mar.	1.2	2.0	14.7
Apr.	2.1	1.1	15.7
May	-1.0	- 1.4	18.5
June	-0.2	- 2.1	19.1
July	-0.2	1.3	19.0
Aug.	0.4	1.0	17.8
Sep.	0	- 2.2	15.9
Oct.	0.4	- 2.0	15.1
Nov.	0.8	- 2.4	13.3
Dec.	1.0	- 2.3	12.4
1982			
Jan.	1.8	- 0.3	13.2
Feb.	-0.3	- 0.9	14.8
Mar.	0.2	- 2.5	14.7
Apr.	0.9	- 2.8	14.9
May	-0.2	- 0.8	14.5
June	-0.1	- 5.1	14.2

commodity prices falling 21%. From June 1978 to April 1979, there was another 35% rise in these prices.

The monthly ups and downs of M1 and prices matched fairly well in the past two years, until last September. Since then, industrial commodity prices fell every month until late June, by 21%.

Some decline in relative prices, particularly of inflation "hedges", was probably inevitable if inflation was to be stopped. But a prolonged, broad-based and deep decline in many prices was more than a "wringing-out" of past excesses. Liquidating existing stocks of commodities and assets at falling prices did not make it easier to produce more at stable prices. Indeed, it has squeezed profit margins of producers of primary products, worldwide, and raised future living costs by reducing wealth.

Some cyclical recovery in commodity prices is perhaps equally inevitable, since many of these prices have fallen below marginal cost. No recovery has ever begun with falling commodity prices, which is why they are a leading indicator. There was, however, no systematic upward trend in this index during the 1975 recovery. The first clear signal of "reflation" as in 1972-73, was the accelerating rise in gold prices that began in September 1976, rising 20% in 1977, 30% in 1978, and 119% in 1979. Similarly, the first sign of abrupt "disinflation" began with the falling gold price after September 1981.

Table 3 shows the transition from the deep recession in late 1974 to the recovery the following March. The huge increase

Table 3

Recession and Recovery

	Federal Deficit* ($ billions)	M1*	Fed Funds	Industrial Commodity Prices	Producer Prices*
1974 III	- 8.4	3.1%	12.1%	- 3.6%	29.9
1974 IV	-22.4	5.1	9.4	-12.5	18.5
1975 I	-45.5	2.9	6.3	- 6.9	- 1.8
1975 II	-99.0	6.2	5.4	0	3.9

*annual rates

in the budget deficit obviously did not prevent interest rates from being cut in half, nor was the reduction of interest rates inconsistent with a dramatic reduction in inflation. Changes in M1 or producer prices gave a poor indication of what was going on in this period compared with the early fall in commodity prices and subsequent stability.

In his Newsweek column of October 16, 1972, Milton Friedman said growth rates of M1 and M2 "have not been dangerously high." On September 23, 1974, Professor Friedman suggested that monetary growth was "still too high." On March 10, 1975, he argued that money growth was "undesirably low". Using the prices of commodities as a guide would have provided the exact opposite conclusions, and without the need for expert judgment.

The possible ways of implementing a price rule are as varied as ways of pursuing some quantity of money. Some favor stabilizing a commodity index first, then making the dollar convertible into gold. Others favor targetting the price of gold, then fixing it after a period of general price stability.

A price rule can easily supplement or supplant the Fed's current technique of getting at price stability indirectly through attempting to control or predict money, velocity and the volume of real transactions. A price rule simply says to ease when sensitive prices are falling and tighten when they rise. Gold could serve this purpose very well. As the Gold Commission report conceded, "the price of gold has also served as a good barometer of market anticipations of inflation".

Until gold is pegged, its price is not exactly a "proxy for all prices," but is instead a proxy for excess demand for or supply of cash. People sell extra gold to get liquid, or sell extra cash to get gold.

Once the gold price is pegged, it becomes the Walrasian numeraire, which anchors the abstract unit (a dollar) to the universe of economic goods. Gold does not then have to be a "proxy for all prices," because all prices are expressed in gold-equivalent units. This is less arbitrary than expressing prices in something called "dollars" that have no predictable link to anything. This is what the Constitution means about the Congressional responsibility to regulate the value of money.

As a modest first step, the Federal Reserve's reports to Congress could be required to demonstrate the relationship of monetary actions to various prompt and sensitive measures of price. There could be a legislated permanent mandate to stabilize prices, with sanctions against failure.

One variation on a quantity rule might also be helpful. This would be to put a legal limit or prohibition on any additional monetization of federal debt. That is, the Federal Reserve's holdings of Treasury and agency debt would be frozen or allowed to grow at only a modest rate. This is not as rigid as a permanent lid on the monetary base, because the Fed could buy other securities or use the discount window more actively during liquidity crises. The limit on monetization would, however, largely sever any supposed link between future budget deficits and dishonest methods of financing them. Interest rates on bonds and mortgages would surely fall.

A legal limit on debt-monetization would help Treasury financing, not hurt it. The Fed buys only a small portion of the government's deficits, and its profits on that debt are a small share of the revenues. The threat of excess monetization, however, raises the inflation premium in interest rates, and thus raises the government's interest expense on the much larger volume of debt rolled-over every four years.

A gold standard would, of course, accomplish this purpose just as well. Indeed, the main reason that countries have gone back to gold has been to guarantee the principal of their loans and thus reduce debt service costs. The reduction in interest rates reduces budget deficits directly and through the favorable effect on economic growth.

In 1980, before he grew allergic to gold, Herbert Stein proposed a one-sided and partial step toward a gold guarantee for the dollar: "One can hardly imagine a hyperinflation and all its attendant uncertainties going on," wrote Professor Stein, "while the government honored a commitment to sell gold at a fixed price. Some version of a gold standard may, therefore, be useful...to provide assurance that there is a limit beyond which inflation will not go. This function does not, however, require a continuous tight link between the quantity of money and the quantity of gold. The purpose could be achieved by a commitment to sell gold at a fixed price, the government remaining free to manage monetary policy by whatever rules or lack of rules it chose, so long as it protected its ability to honor that commitment."

The only problem with the Stein Plan is that it does not contain comparable protection against deflation, which requires a parallel commitment to buy gold at a fixed price. It is, however, a magnificent step in the right direction, and I heartily endorse it.

The key questions about monetary policy are; first, should it operate by rules or whim? Second, must we try to stabilize prices by guessing what money, velocity and real output will be, or can we focus directly on prices? Should monetary policy be judged by rough tools, like M1, or by results?

I do not pretend to have all the answers, but I do believe we have all been ten years late in asking the right questions.

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Representative **Richmond**. My Reynolds, thank you for your most comprehensive testimony. I want to apologize for the fact that Senator Jepsen had to go vote and now I have to go to the floor of the House to make a statement on nerve gas. So while I would much rather discuss your statement with you, I'm afraid that will put the subcommittee into recess until the Senator comes back and he should be back any minute.

[A short recess was taken.]

Senator **Jepsen**. For the third time we will call this Subcommittee on Monetary and Fiscal Policy back into order and I would advise the panel, as per our discussion, that we will now have the testimony of Mr. Raboy and your testimony in its entirety will be printed in the record as if read and you may proceed then on any basis that you so desire. After your testimony I will then be leaving and Bruce Bartlett will be moderating the panel for an exchange of both questions and interchange for the record. I appreciate your comments and the testimony that you've prepared and I want to make sure that we do not only capture in its verbatim words, but we also have the flavor of the interchange which I think will be very helpful.

Mr. Raboy, you may proceed. Thank you for your understanding.

STATEMENT OF DAVID G. RABOY, DIRECTOR OF RESEARCH, INSTITUTE FOR RESEARCH ON THE ECONOMICS OF TAXATION, WASHINGTON, D.C.

Mr. **Raboy**. Thank you, Mr. Chairman. My name is David Raboy and I'm the director for research for the Institute for Research on the Economics of Taxation [RET]. Today I will address the unfortunate situation of persistently high interest rates and its relationship to monetary policy, and the more general question of the proper monetary policy within the context of the free market system.

ALTERNATIVES TO THE CURRENT FEDERAL RESERVE POLICY

It is my personal belief that the market does provide the most effective vehicle for the allocation of scarce resources. That is the theory. What is the pragmatic application of such a theory? In today's world, the political embodiment of such a theory addresses four areas.

First and most fundamental concerns the overall level of Government expenditures. A second would be the method by which those expenditures are financed. A third is inefficient and cumbersome regulation must be limited. And finally, monetary theory and policy must be consistent with this market philosophy. All four of these planks of this type of a program have something in common; although they address different areas, they have a single goal—to make markets more efficient.

Well, what kind of a monetary policy is consistent with the goal of making markets more efficient? This is a different question than the one that is usually asked. Usually the question is: What kind of monetary policy is consistent with any given fiscal policy? And, in fact, a good deal of criticism has been leveled at this administration based on the charge that the "loose fiscal policy," whatever that means, is conflicting with tight monetary policy.

In the current context, the looseness or tightness of fiscal policy apparently is defined only in terms of the budget deficit. It seems that if the Government were to spend 30 percent of real GNP but were to balance the budget, that would be considered tight fiscal policy; and if the Government had a budget occupying 16 percent of GNP without a balance, that would be considered loose fiscal policy.

Let me point out that this concept of compatibility of fiscal and monetary policy harkens back to the days of Keynesian demand management when it was believed that by pumping up the money supply you could increase output and decrease unemployment, basically by fooling people through money illusion.

There is only one monetary policy that is consistent with any fiscal policy, and that is the policy that minimizes the distortion of the flow of information that the market provides. The sole purpose of monetary policy, as everyone today has said, should be to provide a stable unit of exchange. Now, while the monetary-fiscal mix buffs are incorrect in their assertion that tight money, reinforced by deficits, has caused current high interest rates, it is true that we ought to take a close look at monetary policy as a key to explaining high interest rates. As an aside, statistically, the Federal deficit has been relatively unimportant over the post-World War II period as an explainer of the interest rate phenomenon.

A better gage of crowding out is total Government expenditure, which is the true measure of the level of real resources extracted by the Government from the private sector. Current high rates of interest are caused by previously loose and currently volatile monetary policy. The key to low, stable interest rates should form in the monetary area and would involve a slow, stable monetary policy.

To briefly review the relationship between the money and interest rates, contrary to the conventional wisdom, the Federal Reserve cannot create credit. It can only create money. Credit, in real terms, can only be created by an act of private savings or by deferral of present consumption. The interest rate is the price of credit, not money, and like any other price, it's set by the forces of supply and demand. The supply of credit is the aggregate savings pool. Demand for credit is total borrowing. Anything that decreases savings or increases borrowing will result in higher interest rates.

What happens when the Fed expands the money supply, as is being suggested currently in certain circles—of course, the common method of monetary expansion is the system of open market purchases and because of the fractional reserve system there is an illusion that credit has been created, that an expansion leads to loosening of credit. In fact, in the extremely short run, some liquidity may have been injected into the system. Therefore, the conventional wisdom holds that a monetary loosening will bring down interest rates.

Unfortunately, the story doesn't stop here. Thousands of investors and borrowers who comprise the capital market structure view the Fed's actions in a different light. The monetary expansion is viewed as a precursor of inflation and inflationary expectations increase with monetary expansion. Savers withdraw funds from the market until nominal interest rates have risen to the point where the previous real return is guaranteed and borrowers go through a similar process.

The net result, after a monetary expansion, is interest rates rise by the amount of expected inflation or some approximation thereof.

If monetary policy is not only loose, but also volatile, a monetary expansion could result in a credit crunch and the destruction of the long-term bond market is evidence of this.

The theory and the reality in this case are matched. The overwhelming body of empirical evidence indicates that the inflation expectations component is the dominant factor in current interest rates. And yet, in the press, the chief economist of the Commerce Department and assorted Senators and Representatives are calling for a loosening. A further loosening of the money supply would only guarantee one thing: a prime rate above 20 percent.

If monetary policy is the key to expectations and thus interest rates, what ought the Fed be doing? Obviously, there are more than a few schools of thought on this issue. Within the free market camp, two basic groups exist: those associated with the monetarist solutions and those that advocate a return to some form of commodity standard, in general gold. I tend to favor those arguments in the monetarist camp, although I still consider myself to be a supply-side economist.

I will not address some of the more ludicrous charges that blame virtually all of recent business cycle activity on something called mindless monetarism related to Keynesism and maybe Godless atheism. Monetarism has been tried in this country just about to the same extent as supply-side economics, which is to say hardly at all. Nor will I respond to current attacks on monetarist papers presented two decades ago and will restrict my remarks to something I consider to be slightly more relevant, and that is recent policy directives in the monetary area, and certainly legitimate questions exist.

Can the Federal Reserve conduct monetary policy so as to produce a stable unit of exchange? What is money? And if we can define the relevant money, can the Fed control it?

It has been pointed out in many places that we exist in a world economy, that there is a Eurodollar market, that financial innovations have produced a slew of many substitutes and because of these factors it is argued the Fed can neither define or control money. Certainly these things exist. The existence of Eurobanks in and of itself does not prove lack of control by the Fed. In the economics profession there is a longstanding procedural tradition and this same tradition exists in more pure sciences. First, one develops a hypothesis and then one must subject the hypothesis to empirical testing. In economic jargon, there is a theory and then there are elasticities.

Theoretically, the Eurodollar market may have some effect on the Fed's ability to control the money supply, as might financial innovation, but are such factors empirically relevant?

So, when all else fails, when the posturing and gesticulating is over. when all the straw men have been set up and successfully knocked down, when all the free market consulting firms have successfully differentiated their products and profits are up, the serious economist, as a last resort, ought to feel compelled to observe the data because the data tells a very interesting story.

Again, there are two questions here. Is there a meaningful definition of money and can the central bank control it? I'll take these questions in reverse order. There is something called the monetary base which is defined as liabilities against the Fed plus the currency and a couple of adjustments thrown in, and virtually all economists agree that the Fed can pretty much control the base and it certainly can control the reserve component of the base. So what?

It turns out that there is a very interesting relationship between the base and the money aggregates. They move together. When the base is stable, so are the aggregates. When the base oscillates, the aggregates oscillate even more wildly.

I think empirical evidence points up that much of the volatility in M_1 is caused by volatility in the monetary base from conscious changes on the part of the Fed, and to me, it is obvious that the Fed can control the fluctuations in the aggregates by sticking to a steady course with respect to the base. In fact, this was exactly the policy prescription for many monetarists a decade ago. The Fed should ignore the weekly or monthly fluctuations in the aggregates and stick to an annual rate of growth in the monetary base. Then, and only then, the aggregates would converge with the same growth path.

This year and since 1979, the Fed has been doing the opposite. But even if the Fed can control the base, what relevance does this have for policy purposes? What is the relationship between the monetary base and other macroeconomic variables, specifically prices, nominal GNP and interest rates?

The evidence back in the 1970's suggested that the base tracks relatively well with nominal GNP. This hearing is concerned primarily with interest rates. The data also show over the current period and over the postwar period a very tight relationship between interest rates and the monetary base. In periods when the growth rate of the monetary base was increasing, interest rates were rising, and vice versa. The most casual observation of the data or the most sophisticated econometric techniques would suggest the same thing: a slow stable growth rate in the monetary base would result in low stable interest rates. And this is the primary policy change the Fed should make. It should adopt a money rule using the base as its target. It ought to ignore the aggregates, at least in the short run, and should not go through periodic short-run revisions.

The recent monetary volatility has two sources. The first has to do with conscious changes in policy, due in no small part to political pressures. Take a moment, go over the last 2 years, and graph points of time when there were conflicting signals coming out of this administration and severe pressures from the Congress. Graph that against changes in the direction of monetary policy. I think you'll find a considerable correlation.

The second source of volatility has to do with the proper operating procedures. It was a good thing that lag reserve accounting has been scrapped. We ought to have a floating discount rate that is set higher, not lower, than market rates. And finally, again, the most important thing is the target of the Federal Reserve policy should be the monetary base, not M_{1A} or M_{1B} or M_2 or any M.

Should the Fed remain independent? One side says that the public has the right to the total economic package that it voted for, and this certainly has some validity. But I think greater promise exists with legislating specific rules that the Fed must follow. By statute, the Fed should be constrained to a specific annual growth rate in the base and this should be set that when adjusted for loss of exchange—and these are trend changes I'm talking about—there is sufficient money for efficiency and transactions without inflation.

But won't this artificially strap the economy? Not at all. We have a pretty good idea about the steady state growth properties of this economy as well as the way in which technical advance in the financial industry affects velocity, so we can set a growth rate that would achieve this goal.

By the way, the serious empirical work that I'm aware of shows that the trend in velocity is relatively stable and this stands to reason. When we bandy about the term velocity, we often forget what velocity is. It's the number of times that dollars turn over. It's the efficiency in the way people use money. Well, what ought to influence this?

One of the primary things that will influence velocity is how scared people are. If they think that their purchasing power is going to be eroded that is going to affect the way that they turn over dollars and thus velocity. I think it is plausible to assume that a great deal of whatever variability in velocity exists is attributable to variability in inflation expectations, which is in turn a function of variability in Federal Reserve policy.

What about a gold standard? Well, first of all, I think that the money rule will work and if that's the case, then there's no good reason to immediately switch to a commodity standard. We have all the tools we need. All that is missing is a little gutsy legislation.

If, however, at some point in the future, financial innovation or conditions in the world are such and become so advanced that the link between relative macroeconomic variables and the base is served, then, and only then, should we consider a commodity standard, but not until then.

Going to the type of gold standard that Mr. Reynolds suggests I do not feel will impose the needed discipline on the central bank anyway. There are basically two types of gold standards: a strict one, or the type that Mr. Reynolds suggests.

The problem with the first type is that it leaves the Nation open to exogenous shocks which people discount and some other people discount. My favorite example, some people might say straw man, concerns the Presidency of Andrew Jackson. Recent historical research has shown that an exogenous event led to the inflation of the 1830's. This was purely the fact that Britain discovered that they could purchase tea and silks from the Chinese with opium instead of gold and silver, and a lot of that excess gold and silver flowed into the United States over a period of years, generating an inflation. Then severe internal conditions in Britain led to a specific outflow. The money went back to England and the great panic of 1837 was precipitated.

Proponents of the type of system advocated by Alan Reynolds argue that we can get around the problem of exogenous shocks by giving the Fed some discretion. If the Soviets or the South Africans attempt to manipulate the market, the Fed can ignore the signals. Once discretion is given to the Fed under the gold standard we are back to square one and monetary policy will again be subject to the volatility of political pressure.

But all of that is academic. A switch to a solid money rule based on monetary base is a relatively straightforward exercise and I believe that it will restore the price stability that we need and will lead to a stable unit of exchange.

Thank you, Mr. Chairman.

[A summary of Mr. Rabov's statement, together with a paper entitled "Monetarism and Supply Side Economics: Is There a Contradiction?", follows:]

SUMMARY OF STATEMENT OF DAVID G. RABOY

- Supply Side Economics and Monetarism are mutually essential components of an overall free market strategy. The former involves a rationalization of the tax system in order to minimize government-induced disruption of economic decision making. The latter strives to provide a stable means of exchange so that market transactions can be carried out efficiently, with minimum risk, in a non-inflationary environment.

- Current levels of market interest rates are associated with loose, volatile monetary policy. Contrary to the conventional wisdom, loose monetary policy causes interest rates to rise and vice versa; this is because the largest component of current interest rates accounts for inflation expectations and risk. This has been true for virtually the entire postwar period.

- The deficit is a poor gauge of crowding out. A better gauge is total government expenditure which represents the true extraction of real resources from the private sector. A budget, in balance, that consumes 23 percent of GNP crowds out more private activity than a budget that is 20 percent of GNP but contains a one hundred billion dollar deficit. Over the post war period no statistical relationship has been established between deficits and interest rates. This is because while deficits have some effect on interest rates, this effect is dwarfed by other factors. Motion is explained primarily by monetary phenomenon.

- The Fed can control the "money" that is relevant for macroeconomic purposes. This is the monetary base, which virtually all economists agree is under the control of the Fed.

- There is a very strong relationship between the monetary base and the money aggregates. More important, a tight relationship exists between changes in the monetary base and changes in interest rates. Fast growth in the base has produced rising interest rates and slow growth in the base has resulted in decreasing rates. Much of the volatility in both the money aggregates and interest rates has been caused by volatility in the monetary base.

- The Fed should, and can, develop operating procedures that guarantee a slow stable rate of growth in the monetary base. As such their target should involve the base and not the money aggregates or interest rates.

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institute for research on the economics of taxation
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MONETARISM AND SUPPLY SIDE ECONOMICS: IS THERE A CONTRADICTION?

Introduction

President Reagan was elected with a philosophy dramatically different from that of previous administrations--a strong belief that the free market provides the best vehicle for the efficient allocation of scarce resources. The pragmatic application of that philosphy took the form of a four point economic program. Critics have argued recently that two of those points are contradictory, that in fact, the underlying theories are incompatible. This charge concerns, of course, supply side economics, which addresses primarily tax reform, and monetarism, which addresses monetary policy and the anti-inflation fight.

The purpose of this report is to address this charge. The analysis presented here suggests that this accusation is without foundation. Rather than being incompatible, the two theories are mutually essential.

Both theories embody a belief in the efficacy of the free market--of the forces of supply and demand. Given this belief, each body of thought addresses a separate area of government intrusion into the economy. The intent of each is to minimize government-induced disruption of market signals so that markets will function more efficiently.

Section I gives an overview of the issue. Section II reviews the basic analytics of monetarism, while section III restates the principles of supply side economics. In section IV, the question of the compatibility or incompatibility of the two theories is discussed.

I. Overview

The economic strategies that a government pursues are influenced by the theories in which it believes. Since the late 1970's, a revolution has occurred in America's economic policies. Keynesians' beliefs have lost ground, first to monetarist and

Note: Nothing written here is to be construed as necessarily reflecting the views of IRET or as an attempt to aid or hinder the passage of any bill before Congress.

then to supply side prescriptions. The transition resulted primarily from disappointment with the long-run performance of Keynesian management. Unemployment, inflation, and productivity all exhibited disturbing trends. The unemployment rate, which had averaged a modest 5.1 percent between 1955 and 1960, ascended to 7.1 percent for the 1975 to 1980 interval. For these same periods, the average inflation rate jumped from 2.4 percent to 7.5 percent, and the average yearly improvement in worker productivity dropped from 2.6 percent to 1.2 percent.[1] Just as disturbing, umemployment and inflation appeared to ratchet upwards with each business cycle.

Whereas "countercyclical policy" and "aggregate demand" were once the economic watchwords, phrases like "monetary rule" and "relative price effects" now command our attention. Not surprisingly, this dramatic change in orientation has caused some alarm. Time noted the concern of critics that the "twin offensives of stimulating the economy by slashing taxes and breaking inflation through tight money, would result in continued high interest rates and sluggish growth."[2] The efforts of certain atypical supply siders to denigrate Keynesians, monetarists, and those who oppose the gold standard has further strengthened the unfortunate perception that monetarism and supply side economics must be natural enemies.[3]

Correcting false impressions is the aim of this report. It examines two of the most serious charges. These charges are 1) monetarism and supply side economics are superficial theories with no intellectual basis; 2) these theories produce incompatible effects that condemn the economy to continued inflation and high unemployment. The best way to refute the first accusation is by presenting the economic propositions that underlie each theory. This is done for monetarism in section II, and for supply side economics in section III.

These propositions prove to be plausible, and anything but exotic. Moreover, they are founded upon a common bedrock--a belief in the neoclassical theory of supply and demand, the efficacy of the free market, and hence one of the oldest, most successful, and most understandable constructs in economics. Basically, this theory has two aspects. First, just as nature abhors a vacuum, so neoclassical theory asserts that the economy refuses to tolerate persistent surpluses or shortages; price adjustments eliminate them. Second, firms and individuals respond to relative prices. Thus, if the price of chicken falls relative to that of beef (as it has in the U.S. over the past decade), consumers should respond by buying comparatively more chicken (and they have).[4]

A bonus from this laying out of the monetarist and supply side structures is that it makes clear what those ideas really mean. It shows that they are not different approaches to the same problem, but have distinct purposes. Monetarism applies neoclassical theory to monetary conditions and offers a method of curbing inflation. Supply side economics focuses on government distortions of relative prices, especially those that lower the relative rewards for work and saving (or capriciously favor some forms while discouraging others). By lessening these impediments, supply side economics seeks to stimulate economic growth and productivity and achieve economic efficiency.

Realizing that monetarism and supply side economics have different targets lessens the force of the second indictment: that they are contradictory theories. Section IV further examines the allegations of inconsistency. The fears of disaster spring from several different scenarios which, unfortunately, are rarely differentiated from one another; some claim that monetarism blocks supply side success while others reverse the blame. On examination, most of the criticisms prove off target. Political over-promising has generated some of the confusion. In contrast to the short-run time frame of Keynesian economics, both monetarism and supply side economics are directed towards long-run economic conditions and trends. They are not designed to suit individuals who demand a "quick fix," who care about next week but not about two years from now.

II. Principles of Monetarism

Although the price stability promised by monetarism is an important domestic goal, the Federal Reserve Board's (Fed's) move towards monetarism (most monetarists argue that it has a long way to go) was, ironically, a response to an international crisis. In October 1979, the value of the dollar was under intense pressure in foreign exchange markets despite having lost almost 30 percent of its worth since 1970.[5] A rescue package engineered in late 1978 had quickly lost its effectiveness. U.S. officials, fearing a rout should other nations lose faith in the dollar as a reserve currency, desperately embraced the central recommendation of monetarism: a monetary rule. Specifically, the Federal Reserve pledged to concentrate henceforth on a money supply, rather than an interest-rate target, and to lower that target gradually into a non-inflationary range. Since then, the dollar has regained close to 20 percent of its value.[6]

However, the principal purpose of this section is to weigh monetarism's domestic potential. In order to evaluate it fairly, one should distinguish it from the popular straw-man version, the allegation that monetarists believe "only money matters." This is emphatically not a monetarist belief. Labor conditions, tax rates, foreign trade, weather conditions, and technology are some of the other factors that also affect the economy. A more accurate monetarist motto would be the more modest: "money matters especially in determining the long-run price level."

Even with regard to prices, the above statement makes no claim that only money matters. Output reductions caused by bad harvests, business cartels, onerous regulations, and protectionist trade barriers all drive up the general price level by intensifying the scarcity of goods and services. Inflation is different, though. It is not defined just by high prices, but by ever rising ones. Business cartels, as a typical case, raise prices when they form but, lest they lose all customers, do not raise prices perpetually. Explaining a stubbornly spiraling inflation-rate, such as that of the post World War II era, requires a succession of price-elevating events. Pointing to a few firms or unions that have been powerful for a generation might explain why the price level is a bit higher than otherwise but does not explain why it has been rising persistently.[7] Moreover, the non-monetary events described above are offset by others, such as good harvests, new mineral discoveries, and technological advances, that lower the general price level. The monetary explanation does not encounter these difficulties. The American money supply has persistently expanded more rapidly than real output. Between 1960 and 1981, the money stock grew 211 percent while output gained only 105 percent.[8] The succession of years in which money growth exceeded real growth is the only logical explanation for persistent inflation.

A monetarist would believe in the efficacy of the free market system. The trick, then, is to provide a stable means of exchange so that transactions and other economic activities can take place as efficiently as possible. The more stable and predictable monetary policy is, the less noise and distortion is introduced into the market mechanism. The goal of monetarism, then, is to reduce monetary friction in the economy. Monetarism's intuitively plausible motto is the outcome of three economic propositions that will now be stated and explained:

1) Market forces automatically drive an economy toward full production and employment.

Although this is the most controversial of the propositions, it is directly based on the theory of supply and demand; that is, the free market will guarantee an equilibrium. Notice that this is also the cornerstone of supply side economics--that the market system allocates resources to their best uses and, in this instance fosters full utilization of resources. Excessive government intervention, on the other hand, will, because of interference with market signals, lead to underuse of resources.

Absent market distortions, this condition of a full employment solution will hold. In order to violate this condition in the long run, firms and individuals would have to be irrational. Consider an individual seeking employment. Naturally he desires the highest wage, most prestigious position, and most comfortable working conditions possible. Assume he begins by requesting a salary of $20,000, but that the rewards of work exceed the costs as long as his salary is above $13,000. If no employers step forward at $20,000, the individual has learned something about the job market and would be sensible to lower his asking price, say to $19,000. The hunt continues, with the worker's asking price being lowered on the basis of added information, until he finds a job or reaches $13,000. As indicated, employment will probably not be instantaneous. Learning about job market conditions takes time. Labor contracts, commonly of 3 years duration in the U.S., also slow the required wage flexibility. The important point, however, is that the individual displays downward wage flexibility, unless he is irrational. The reason is that as long as a job pays more than $13,000, the individual is better off to take the job than to refuse it. If the individual could obtain employment at, say, $17,000, yet declines to accept one cent less than $20,000, he is deliberately sacrificing a hypothetical surplus of $4,000.

Is the economy at full employment if the individual can only secure a maximum salary of $12,000 and consequently chooses not to work? The answer is yes. Full employment does not mean that people toil 24 hours a day or that everyone is in the work force. Its definition is that anyone willing to work at his market wage is able to do so. Much the same logic indicates why land and capital will not remain unemployed in the economic sense. The argument is completed by recognizing that if productive inputs are fully used, output is at its economic capacity.

The significance of this proposition is that money cannot affect employment or production in the long run. A trend of rapid money growth does not permanently increase production above the output associated with a trend of slow money growth. For instance, between 1870 and 1895, the money supply grew more slowly than national output, prices fell, yet production registered solid gains.

Actually one exception should be made to the statement that money and output are independent in the long run. Unsettled monetary conditions, such as an inflationary run-up of the money supply, confuse economic agents and distort real incentives. Recently, for example, uncertainties regarding inflation have crushed both the long term bond market and the home mortgage market. This depresses both corporate and residential investment; it has real and permanent consequences.

2) There is a stable relationship between how much money people wish to hold and certain economic variables.

In order to understand this, it is only necessary to realize the role money plays in the economy. Why do people choose to hold money? To an individual, money provides a service because it eliminates the need for barter. A readily acceptable unit of exchange means that transactions don't take as much time, leaving more time for leisure or work. Similarly, a firm's transactions are simplified through the use of money. As such, a certain amount of money is necessary to make industry productive.

Money provides a service and it is logical to conclude that as economic activity increases, as production and hence transactions increase, the demand for money will increase. Thus, it can be stated that the demand for money depends on output or, in a period of stable prices, how much money people desire will be influenced by aggregate income.

A monetarist would argue that the relationship between the demand for money and income is a stable one. The simplest type of predictable relationship is a stable one. If, as an illustration, firms and individuals desire monetary holdings of $25,000 when money income is $100,000, a stable demand relationship implies that desired balances will rise to $50,000 when income climbs to $200,000. Of course, other factors, such as habits, credit arrangements, interest rates, and inflation, also play a role by altering either the benefits of holding money or the costs of doing so. As an example, inflation increases the true cost of holding money by eroding its purchasing power. This view is supported by Phillip Cagan's observation that in several cases of hyperinflation (the most notorious of which was Germany's experience in 1922-1923, when prices rose several billion fold) money balances declined relative to money income.[10] Closer to home, accelerating inflation, along with greater credit availability and improved financial management, helps explain why money holdings have declined relative to income at an average rate of 3 percent yearly since 1960.[11]

The question is how to provide the right amount of money. If money is a stable function of, among other things, output or GNP, then, as an approximation, the rate of money growth should be the same as the growth rate for real output. This would be the monetarist prescription. If money growth exceeds that of output, then there will be more money in circulation than people wish to hold--supply will exceed demand. Individuals will attempt to get rid of excess money by spending it, bidding up prices, and inflation will be the result.

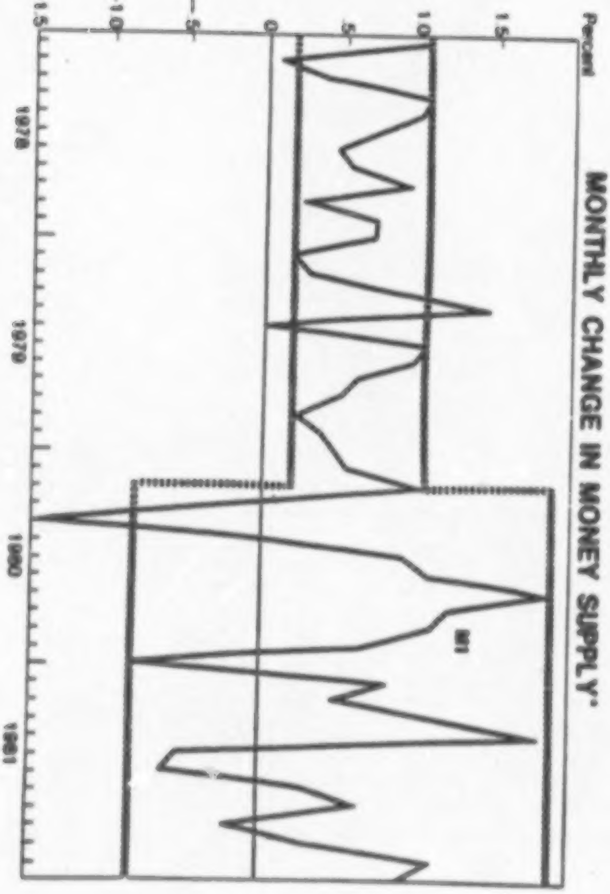
3) A nation's monetary authority (the Fed in the United States) has the ability to control the money supply.

This proposition seems self-evident at first blush. Few observers would deny that the Federal Reserve can select a particular monetary target and come fairly close to meeting it after several months. Nevertheless, the issue is more complex. Certainly, as Figure 1 shows, money growth has been quite volatile since 1979. One might be skeptical of the Fed's monetary control for two reasons. First, the Fed might entertain a higher goal that conflicts with monetary regulation. For instance, until 1979 the Fed used interest rates as the gauge for monetary policy. Implicit in this procedure was the belief that interest rates could be kept low by manipulation of the money supply. By increasing bank reserves and as a result, money supply, it was believed that total credit would expand and that interest rates would drop.

As a postscript, the Fed wouldn't have much luck in dramatically lowering current market interest rates even if it tried. The Fed is limited because the sharp money supply increase used to trigger the drop in rates would be widely (and correctly) perceived today as a precursor to inflation. Lenders, having already been burned several times by inflation, would quickly add an inflation premium onto their real interest charges for protection. In today's sensitive climate, a return to easy money would likely raise, not lower, market rates and do so almost immediately. The seemingly paradoxical result of a monetary expansion would be a credit crunch, not an increase in available credit.

At any rate, the Fed is a political animal and much of monetary volatility of recent times is related to conscious decisions on the part of the Fed. Monetary policy is a blunt instrument, so overshooting often occurs. Since many different versions of "how the world works" exist, different monetary policies have been linked to different goals. Interest rate targeting has already been mentioned. A further relationship, now discredited,

Figure 1



MONTHLY CHANGE IN MONEY SUPPLY*

*Department of the Treasury

concerns the unemployment/inflation trade-off or the infamous Phillips curve. Any similar belief may result in monetary volatility caused by conscious changes in direction by monetary authorities. If the majority of money uncertainty is caused by conscious decisions on the part of the Fed, then institutional measures can be taken to correct the problem. Many critics charge, however, that regardless of intent, the Fed is technically unable to control the money supply. They point to innovations in the financial markets which allow financial groups to avoid reserve requirements. Further, it is argued that no one really knows what money is and as a result a proper target is illusive. In essence, the argument is that financial markets have become so sophisticated and global that a new money can be created almost as soon as monetary authorities place costly restrictions on the old money.

There is an aggregate over which Fed does exert direct control. This is referred to as the "monetary base" and is the sum of all reserves plus cash in the economy. By conducting open market operations the Fed can control the base at will--this much is not in dispute. The question is whether or not there is a strong relationship between the base and measures of money in the system, or, more important, a relationship between the base and other macroeconomic variables.

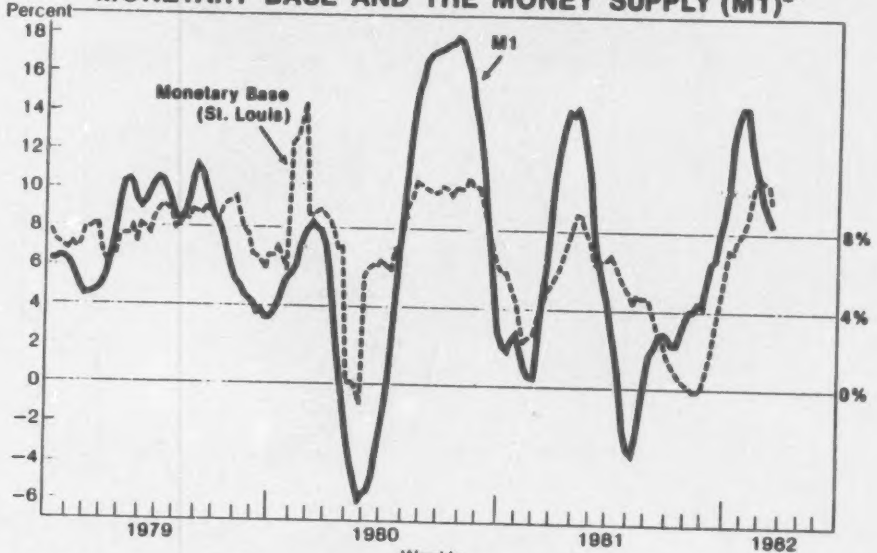
In Figure 2 we present the relationship between the monetary base and the most widely observed money aggregate, M1. The relationship is quite dramatic. M1 moves in the same direction as the base. The interesting observation is that the swings in M1 are more pronounced than those in the base. In periods where the base is relatively steady, M1 is steady. However wide swings in the base are accompanied by even wider swings in M1. The obvious conclusion is that the volatility of M1 can be dampened by controlling swings in the monetary base. And the Fed does exert control over the base.

Even more interesting is the relationship between the monetary base and other macroeconomic variables, specifically interest rates. Figure 3 shows the relationship between the growth rate of the monetary base and three-month Treasury bill rates. The relationship is very strong. Accelerated growth of the monetary base is associated with high interest rates and slow base growth correlates with low interest rates, exactly as the monetarists would predict. The evidence suggests that the Fed can control the "money" that is relevant for macroeconomic purposes.

The three monetarist principles can be considered as follows: government should strive to provide a stable means of exchange. Excessive monetary growth results only in inflation. Thus,

Figure 2

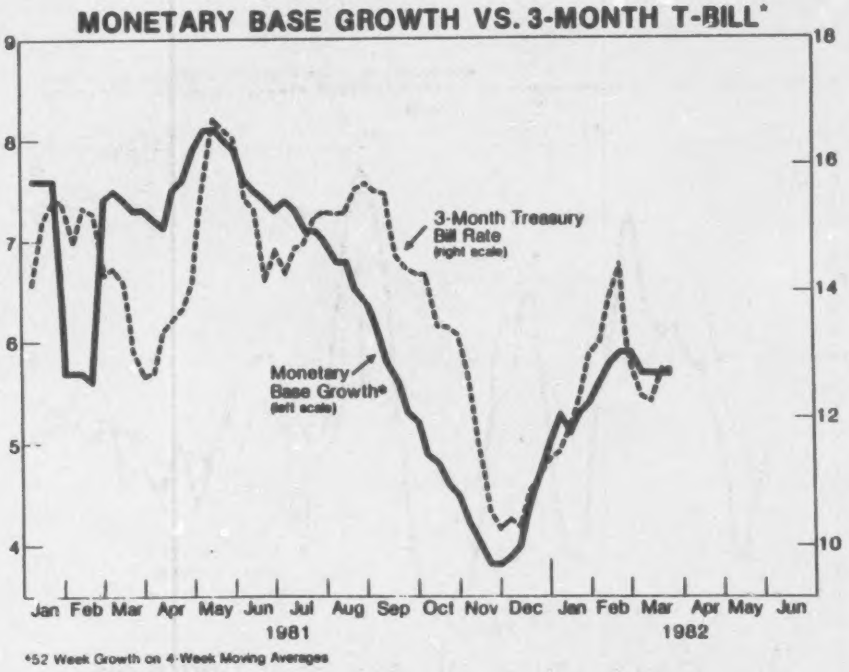
QUARTERLY RATES OF GROWTH OF
MONETARY BASE AND THE MONEY SUPPLY (M1)*$^{\Delta}$



*Quarterly growth rates based on four-week averages compared with four-week averages thirteen weeks earlier, at annual rates.
Latest week plotted: March 17 for M1, March 17 for monetary base.

$^{\Delta}$Department of the Treasury

Figure 3



*Department of the Treasury

government should limit monetary growth to what is necessary for relatively frictionless economic activity--approximately the growth rate of real output. This goal is achievable because the Fed does exert control over the macroeconomically relevant measure of money.

In combining these principles of monetarism, an example may be helpful. Assume the money stock is $25,000, that money income is $100,000, and that desired money holdings are 25 percent of money income. Based on this information, the economy is in balance. For simplicity, also imagine that the economy's productive capacity is constant. By the third proposition, the Fed can change the money supply if it chooses. By the second premise, desired money balances remain approximately 25 percent of money income. With that in mind, suppose the Fed raises the money supply to $30,000. Immediately firms and individuals find themselves holding relatively too much money. Their excess is $5,000. They attempt to get rid of it by lending some and by buying commodities with some. (The economy as a whole cannot get rid of any money; what one person parts with is gained by another.) Thus the Fed has precipitated an increase in the demand for commodities. At the original price and output levels, this spurt in demand causes a shortage which can be compensated for in either of two ways: higher prices or greater output. At this stage, the first proposition enters. In the long run, output is already at capacity. Because of that, the money supply increase can, in the long run, only raise prices. The economy eventually returns to equilibrium when higher prices have pushed money income to $120,000, restoring the desired ratio between money and money income.

Now return to the original conditions, but suppose that real income is growing by 10 percent annually. If it is $100,000 this year, it will be $110,000 next year. What must the money stock be next year in order to maintain price stability? The answer is $27,500. In working that out, one uses the monetary rule of matching the increase in money with that in output. If the ratio of desired money holdings were declining, which it has been in the United States, the necessary money supply increase would, of course, be smaller.

The monetarist prescription for stable prices and a stable unit of exchange is that the growth rate of the monetary base not exceed the growth rate of real GNP. To eliminate the politically related volatility of money, some monetarists would favor a statutory money rule. The Fed would be constrained by law to tie the growth of the monetary base to a fixed percentage approximating the average growth rate of the economy.

Technical measures have also been suggested to improve the Fed's control over money. The obvious suggestion, already discussed, is that the Fed stop targeting M1 or M2 and look, instead, at the monetary base. Other suggestions include a floating discount rate, extension of reserve requirements to all "money" measures, etc.

Once again, the purpose of monetarism is to make markets more efficient, to eliminate the noise from market signals. Despite the long run benefits of monetarism, the transition from high to low inflation is painful. Our current recession bears partial witness to that. Nevertheless, tight monetary policies may be shouldering an unfair share of the blame. Several of our problems result from the interaction of inflation, largely the result of easy money policies in previous years, and America's financial structure. Even if the Fed had continued to expand the money supply rapidly, the housing market and the thrifts would be on the ropes now. The problem for the thrifts is that they have a fundamental mismatch--urged upon them by Congress--between the maturities of their assets and liabilities. On their asset side, they are locked into long-term home mortgages, often paying the relatively low market interest rates of several years ago, while on their liability side they must pay the high market rates of today in order to attract funds. Although the Fed's monetary stringency probably pushed up market rates temporarily, the major culprit is the inflation premium. The thrifts will not regain lasting health until market interest rates ease further, and that requires an ebbing of inflation.

High market rates frustrate would-be homeowners for a somewhat different reason. In order to obtain a home mortgage, one must be judged to be financially qualified. That involves, among other things, a comparison of one's income with one's interest payments. The problem is that the comparison is generally being made between current income, which does not reflect expected future pay increases due to inflation, and interest payments, which have incorporated in them compensation to the lender for expected future inflation. Thus the financial test for obtaining a home mortgage is asymmetrical and tends to be too rigorous. Here too, a prudent monetary policy to lower inflation holds the best hope for lasting relief.

Still another industry in desperate shape, autos, would be hemorrhaging regardless of the direction of monetary policy. Although high finance charges discourage some customers, public opinion surveys have revealed that "sticker-shock" is the primary obstacle.

The point here is not that the withdrawal from easy money and accelerating inflation is quick or pleasant, but that many of our current difficulties are the result of dislocations caused by the very problems monetarism is designed to rectify.

III. Supply Side Principles

Supply side economics is both a very old and a very new economic theory. Adam Smith, the founder of modern economics, was a "supply side" advocate two centuries ago. To him, a nation's ability to produce goods and services was the key determinant of its prosperity, not the amount of gold and silver in the state's coffers, as his predecessors believed. He lauded the competitive market system for generating incentives that encourage both additions to productive potential and the efficient use of existing capacity. Conversely, he berated government for bestowing monopolies, restricting trade, and otherwise protecting special groups from the discipline of competition.

In the 1930's John Maynard Keynes shifted the spotlight from supply to demand, in the process eclipsing supply side concerns. Keynes feared that a shortfall of demand could send employment and production plummeting far below capacity. To a Keynesian, the major challenge and biggest payoff involves preventing the underuse of existing capacity. In this climate, growth is relegated to a subsidiary role because it seems a less pressing concern with a smaller short-term reward. Believing markets to be inherently unstable, the Keynesian revolution brought government to center stage. Government intervention, via monetary and fiscal actions, was charged with maintaining demand at a level consistent with full employment.

Supply side economics has reemerged in reaction to perceived Keynesian mistakes and excesses. In that sense, it is a very new economic theory. The name gives it away: supply side (a label not used by Smith or other pre-Keynesians) is the perfect counterpoint to the Keynesian preoccupation with the demand side. While Keynesians regard demand management as the route to prosperity, supply siders look to a society's fundamental ability to produce goods and services.

Do supply siders, in a mirror image of Keynesian advice, advocate government intervention to force people into saving more, to prod firms into investing more, and to direct funds into those industries with the greatest growth potential? No, that carries the analogy too far. Like their forbears, today's supply siders prefer market incentives to government edicts. Government-led policies of reindustrialization depend for their legitimacy on the notion that government officials are wiser and more farsighted than people in the private sector. If not, how can they predict industrial "winners"? (If some officials do have this ability, why do they remain in government? They could make millions on Wall Street.) If not, on what basis can they order individuals, who already take into account their future well-being and that of their children, to consume less now and instead invest more towards their future? More likely, government involvement would become perverted, as in Smith's time, into the propping-up of special interests and those with political clout.

In fact, supply siders are more modest. They don't claim superiority to business in evaluating investment opportunities nor to individuals in balancing present consumption against future opportunities. Instead supply siders say that, except in cases of market failures, such as pollution, the incentives and decisions generated by the interplay between individual wants and economic scarcity should be respected. The problem is that government, sometimes wittingly and sometimes not, has skewed those incentives away from work, saving, and investment. Part of this stems from Keynesian efforts to stimulate demand by favoring consumer spending (the largest component of demand) over personal saving. Part also stems from the presumption that while government programs designed to influence the market by changing incentives act quickly, powerfully, and permanently, measures that change incentives only by accident have negligible supply effects.

In the supply side analysis, government interferes with current production and slows growth by its actions on four fronts: regulation, transfer payments, monetary policy, and taxation. Although few would deny that many regulations are constructive and socially beneficial, the rules are often unnecessarily onerous and frequently show little concern for the costs they impose on the private sector. Intelligent supply side remedies are to find out how given regulatory goals may be achieved with the least disruption, and to be willing to ask the more basic question of whether the benefits of certain programs justify the costs. The Reagan Administration appears to be listening to such advice; it lists regulatory reform as a major part of its economic program.

Transfer payments, like social security, unemployment compensation, food stamps, and subsidized housing, generally serve desirable social goals. Keynesians also regard transfers as convenient devices for spurring consumer demand. (As an aside, an especially alluring feature of the Keynesian model is that transfers, because they raise demand, can often be advanced on grounds of efficiency as well as equity. It is always nice to be able to have one's cake and eat it too.) Unfortunately, transfers often discourage work and saving, or direct them down pathways only a government could love. As examples: social security lessens the impetus for private saving, welfare causes people to leave the work force, and inexpensive flood insurance, in the past, has encouraged construction on flood plains. The trade-off here is especially difficult because it frequently pits equity against efficiency. However, unless one believes in the head-in-the-sand theory of good government, society will be better off if it faces these hard choices. Some of the current administration's proposed budget reductions explicitly flow from this type of analysis.

Reform of the American tax system is the centerpiece of supply side efforts. This is because the tax system is both pervasive and highly distortive. With over 20 percent of Gross National Product flowing into federal taxes alone, even minor corrections promise great rewards. Moreover, the tax system has been so badly constructed that major improvements are possible.

The goal of monetarism is to reduce the government-induced disruption of market signals caused by volatile monetary policy. Similarly, the goal of supply side economics is to reduce the government-induced disruption of the market mechanism caused by ill-advised tax policy. Thus, "tax neutrality" becomes the supply side watchword.

In a free market, resources are allocated through the pricing mechanism. Prices, costs, or rewards send signals to producers, investors, and consumers as to how to conduct their activities in the most beneficial manner. Anything that distorts relative costs or rewards leads to less desirable decisionmaking.

The tax system distorts relative costs and benefits. Because of the double taxation of income from capital sources, for instance, income taxes artificially encourage current consumption at the expense of productive investment. By moving towards a more neutral tax system, this bias would be minimized. Similarly, high marginal tax rates on labor income encourage leisure or non-neutral activity at the expense of productive work effort.

Supply side economics does not argue for specially targeted tax incentives to direct economic activity; rather, it suggests ways to reduce tax-induced noise so that market forces are used more efficiently.

The most publicized supply side legislation has been the Economic Recovery Tax Act of 1981. This act reduced a broad range of tax rates. Like so many things involving taxes, understanding what it really does is complicated. In some areas, such as estate and gift taxes, the reduction of the maximum personal tax rate from 70 percent to 50 percent, and the acceleration of business depreciation deductions, the act significantly reduces the tax penalties for work, saving, and investment. The phased decrease in personal tax rates, however, is something of a fiction. It just barely holds the line against the tax hikes caused when inflation forces people with constant real incomes into progressively higher tax brackets. The act is significant here because it prevents the bias from worsening, not because it lessens the previous distortion.

The tax arena may become especially challenging for supply siders in the next several months. There is widespread political sentiment that the 1981 tax act cut into revenues too deeply; many want to raise taxes again. From the supply side perspective, all taxes are not created equal. It would be a major setback if the 1981 reductions were simply repealed. If taxes must be raised, supply siders would direct attention towards taxes that do not cause all of the usual price distortions. Consumption taxes, because they do not penalize saving, would be preferrable to most.

To recap, supply side economics is the outcome of three sequential propositions: 1) market incentives (which can also be called relative prices) resulting from the interaction between human wants and scarce resources lead to a desirable pattern of production, including appropriate trade-offs between work and leisure and between consumption and saving; 2) government actions often distort those relative prices; 3) government-induced distortions in turn warp the decisions of firms and individuals. The first proposition is one of the core theorems of modern economics. Although some instances of market failure can be found, few economists challenge in general this theorem's validity. The second proposition is too blatantly obvious to be seriously contested.

The last proposition is the most commonly disputed by non-supply siders. They can attack it at several points. One way is to argue that people do not care about prices. However, both common sense and fundamental economic theory deflect this attack. Consider a person who is indifferent between two alternatives, given their costs and benefits. Now raise the cost of one relative to the other, keeping benefits the same. Clearly the activity whose relative price has risen becomes suddenly the less inviting.

A second approach is to argue that even if a relative price change generates a reaction, that response is probably small. If price changes do not alter decisions appreciably, supply side economics would be technically correct, but unimportant. The burden of proof here should rest with the attackers, for the combination of taxes and inflation often lead to massive price changes. Ultimately, this is an empirical question. Much econometric work has been carried out in the past decade, but much remains to be done. However, casual observation indicates substantial responsiveness.

The main objective of this section has been to demonstrate that supply side economics rests on a solid and orthodox theoretical foundation. Although not everyone may agree with its arguments, those arguments are plausible and accepted by many. Further, the logic of supply side economics is totally compatible with the logic of monetarism. Not a single proposition in either model casts doubt on the propositions of the other. Indeed, the theories are reinforcing. Monetarism provides a means of attaining price stability while supply side economics directs itself toward output and productivity. By reducing inflation, which causes innumerable market distortions, monetarism is a valuable supply side tool. By increasing the level of output that is available, supply side economics helps monetarism in restraining price increases.

IV. The Free Market Approach

The analysis presented here suggests that monetarism and supply side economics, far from being incompatible, are two necessary components in an overall free market approach to economics. Each component has been developed to address a specific area of government intervention in and distortion of the economy. Monetarism strives to provide a stable unit of exchange while minimizing inflation and uncertainty, and supply side economics attempts to encourage the adoption of a tax system that raises necessary government revenues while doing the least damage to the market system. Both types of policies are needed to eliminate government distortions.

Yet some argue that the current recession is evidence that monetarism and supply side economics are contradictory. They argue that the "loose" fiscal policy of supply side economics is on a collision course with the "tight" monetary policy of monetarism.

It is recognized by most economists that the switch from an inflationary to a non-inflationary economy necessarily, but unfortunately, involves some short-term pain. Until relative prices adjust and economic actors come to fully believe that inflation is under control, there will be some disruption of the economy. Contracts have to run their course and be renegotiated and the changing of prices has inevitable repercussions. Further, many people have bet on inflation and are highly leveraged. Thus, as inflation subsides, bankruptcies increase.

But besides these obvious short-run problems, which in no way suggest a contradiction between these two bodies of thought, a more fundamental argument is advanced. It is claimed that the deficits produced by tax reform are producing high market interest rates, which are pushed even higher by tight money. This perception is caused by a misunderstanding of the factors that determine high interest rates.

Simply put, an interest rate is a price and, like any other price, it is set by the interaction of supply and demand. An interest rate is not the price of money; but rather, it is the price of credit. The supply of credit is the aggregate savings pool and the demand for credit is the amount of borrowing. Anything that increases the demand for credit (borrowing) or decreases the supply (saving) will drive interest rates up.

Certainly incurring a deficit, in most cases, represents a net increase in the government's borrowing demand. As such, a deficit will exert some upward pressure on interest rates. But how much is an empirical question.

In the first instance, measuring a deficit in absolute, nominal dollars is meaningless. In order to get a feel for government's actual effects on credit markets, the deficit must be compared to something that represents the society's ability to absorb credit demand--at first approximation, GNP, or better yet, the aggregate savings pool. More exactly, all government borrowing, including on and off budget items, must be accounted for, and the effects of inflation must be considered. By any one of these measures, deficits as a percentage of GNP, deficits as a percentage of the savings pool, or net government borrowing, the highest figures occurred during the period 1975-76. The three-month Treasury bill rate for this period ranged between four and six percent!

Thus, while government borrowing may have some effect on interest rates, this effect is dwarfed by other factors in society. The proper measure of crowding out is that of the government's overall intrusion into the private sector. It is this measure which represents the actual amount of resources extracted from the private sector. A budget in balance that is 23 percent of GNP crowds out more private initiative than a budget that is 19 percent of GNP but includes a $100 billion deficit.

But if critics are partially correct in arguing that a deficit will exert some upward pressure on interest rates, they are totally wrong in assuming that a tight monetary policy will drive rates even higher. In fact the opposite is true. A slow stable monetary policy will be the major factor in bringing rates down.

The conventional wisdom is that a loose monetary policy will bring interest rates down while a tight policy will drive them up. This is based on the illusion that the Fed creates credit. The Fed can only create money, not credit; credit can only be created by an act of saving.

Consider an example: Assume a reserve requirement of 20 percent. The Fed decides to inject 100 dollars into the system through an open market purchase. The broker who sells the Fed the bonds worth 100 dollars, receives a check for that amount which he deposits in his checking account. The illusion that credit has been created stems from the fact that under the fractional reserve system, the bank that received the broker's deposit can loan out 80 dollars, and the next bank down the line can loan out 64 dollars, etc. Thus in the very short run some liquidity has been added to the system and this is where the conventional analysis stops. But the story doesn't end here.

Assume that, prior to the Fed's expansion, there was no inflation and the interest rate was three percent. Private savers will view the Fed's expansion with suspicion because they know that the increase in the money supply will lead to future inflation. Consider what would happen if the Fed's actions increased the rate of inflation from zero to five percent. At a nominal interest rate of three percent, savers would face a negative two percent real rate of return and would withdraw funds from savings accounts or whatever savings vehicles existed. Credit supply would actually diminish. In fact, individuals would not be willing to save as much until the real rate was restored to three percent, which would require a nominal rate of eight percent. At the new equilibrium, there would probably be exactly the same amount of credit as before the Fed's action, only at a higher rate of interest and inflation. No credit will have been created.

In fact, if monetary policy is especially loose and volatile, a "paradox" will result in a credit crunch as savers, unsure as to future real returns, withdraw from capital markets.

The short run liquidity effects described above last about 30 seconds in an inflationary environment. In hyperinflation, money growth is translated into immediate increases in interest rates. Time-series data in this country yield the same results. Figure 3 shows the relationship between growth rates in the monetary base and the three month Treasury bill rate in the recent past. The monetary base is what the Fed actually controls--currency and private bank deposits at the Fed. Rarely will such a tight relationship be seen in economic data. Slower growth rates in the monetary base are associated with dropping interest rates and vice versa.

If the major threat to Reagonomics lies in high interest rates, then not only is the charge that monetarism and supply side economics are incompatible incorrect, but any prescription that divorced the two would be a ticket to disaster. It is only in emphasizing some of the monetarist suggestions that there is hope that interest rates will decrease.

It is beyond the purview of this paper to discuss in detail the policy changes dictated by monetarism. Some of the volatility of monetary policy has been due to political factors, some of it due to technical complications. The former variance can be diminished by stronger and less conflicting signals from the administration. Certain technical changes in the Fed's operating procedure would address the latter source of variance. Rather than trying to meet illusive "M" targets, the Fed ought to focus on the monetary base. Other changes such as scrapping Lagged Reserve Accounting would be helpful. A combination of these reforms, coupled with the further rationalization of the tax code and reduced federal expenditures, would serve to make markets more efficient and increase the growth potential of the American economy.

David G. Raboy
Director of Research
IRET

Michael Schuyler
Research Assistant
IRET

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Footnotes

[1] *Economic Report of the President,* U.S. Council of Economic Advisors, Government Printing Office, Washington, D.C., 1982, Tables B-3 (Gross national product implicit price deflator), p.B-33 (Unemployment, all workers), p.B-41 (Output per hour of all persons, private business sector).

[2] *Time*, Vol. 118, October 19, 1981, p.42.

[3] Jude Wanniski, *The Washington Post*, July 27, 1981, A12.

[4] *Statistical Abstract of the United States*, U.S. Bureau of the Census, Government Printing Office, Washington, D.C., 1980, Tables 211, 1235.

[5] *Federal Reserve Bulletin*, U.S. Board of Governors of the Federal Reserve System, Vol. 64 (August 1978), p.700; Vol. 66 (March 1980), p. A 68.

[6] Ibid., Vol. 64 (August 1978), p.700; 68 (April 1982), A 68.

[7] For a further discussion of this, see Michael Schuyler and David Raboy, "Taxes, Deficits, Inflation, Money, and Interest Rates--What are the Relationships?" *Economic Report* No. 6, Institute for Research on the Economics of Taxation, Washington, D.C., September 1981.

[8] *Economic Report of the President*, 1982, Tables B-2 (Gross National Product, 1972 dollars), p.B-61 (M-1).

[9] Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States: 1867-1960*, Princeton University Press, Princeton, NJ, 1963.

[10] Phillip Cagan, "The Monetary Dynamics of Hyperinflation," in *Studies in the Quantity Theory of Money*, Milton Friedman, ed., University of Chicago Press, 1973.

[11] *Economic Report of the President*, 1982, Tables B-1 (Gross National Product, current dollars), p.B-61 (M-1).

Mr. **Bartlett.** Gentlemen, I apologize for Senator Jepsen having to leave, but the votes and other business robs us of a great deal of time. He did, however, want to get onto the record some dialog between the three of you, since you have somewhat different points of view, and I was wondering if we could, just very briefly here at the close, finish by asking each one of you to comment briefly on the other two persons' testimony and what you see as the differences between your position and their position and whether there's any possibility of reconciliation. We'll start on the left with Mr. Reynolds.

Mr. **Reynolds.** You're starting on the right. Well, I think that in a sense Mr. Genetski's proposal is a halfway house or hybrid, somewhere between a price rule and quantity rule. And so, in a sense, it is a compromise proposal with the strict monetarism that Mr. Raboy suggests.

I have very little quarrel with it in principle. I'm simply trying to make a case for a price rule and let someone else decide how to implement it.

Mr. **Bartlett.** If I could just interrupt, one point that Mr. Genetski made that I'd like you to comment on is this question of whether, when you're at the end of a peak of an inflationary cycle, there aren't too many difficulties in implementing a price rule at that point as opposed to a situation where you're starting from price stability?

Mr. **Reynolds.** But he also said that if you had that rule to begin with, you would never enter into that inflation cycle because you would have had an early signal that you were getting into trouble long before you got into trouble.

Mr. **Bartlett.** What should we be doing right now?

Mr. **Reynolds.** You mean should you implement a price stabilization program when the gold price is $650? No. I certainly do not agree with that. But it's a way of freezing and holding the gains that we've made at such high costs over the past years.

Mr. **Bartlett.** Mr. Genetski.

Mr. **Genetski.** It's just as important to clarify where we are right now in terms of the inflationary cycle and I would have said that the peak of the inflationary cycle occurred a year or two ago, so we are no longer in the vicinity of the peak. We're long past the peak. Some of the indexes which are very slow to respond, such as the consumer price index or the services index, may be closer to the peak than the more sensitive commodity prices, but these inevitably wind down at a slow rate, thus giving a lot of people the impression we're at the peak now; but we're not. I believe we're long past the peak of this inflationary cycle.

Mr. **Reynolds.** Obviously, there are differences between the monetarist position and my own. A lot of them are factual. The trend of velocity is relatively stable. Well, on a year-to-year basis the trend of M_1 is very stable—7.6, 8.2, 7.7, 6.3, to 7 percent—that's very stable. I don't know what this means.

Interest rates reflect expected inflation. Well, that's certainly true of bond rates but it certainly is not true of an overnight Federal funds rate or a 3-month T-bill rate. So that's a factual difference.

The suggestion is that the monetary base is relevant. It is relevant only if it shows a fairly tight connection to the ultimate goal, which is price stability. I don't observe a very strong relationship between the base and even M_1, much less the broader aggregates, unless again, you take a very long period of time, and even then, the question is, What is the final relationship of that aggregate to what you're trying to control, namely, price?

It was pointed out that not so long ago the monetarists were arguing that we should ignore monthly changes in M_1 and I certainly agree with that and I wonder why that has changed so much in the polemical writings in the past year or so.

And then some words were put in my mouth to the effect that I was arguing, if the Soviets attempted to manipulate a gold standard, we should suspend. I've never made such a statement. I don't think that the Soviets could do so or anybody else could do so except by monopolizing the quantity of either dollars or gold and they don't have a monopoly on either. I have said that if we did suspend we would be no worse off than we are today because that's where we are today, where we have suspended.

So there are some factual differences. If I thought this system of his would work, I would be for it. And he says that if he's convinced that his is breaking down some time in the future, he'll be for a gold standard. I'm a patient man. I'll wait.

Mr. Bartlett. Let me just follow up. In your prepared statement you say that at the level of policy advice, monetarism is popularly understood as the proposal to literally ignore prices, interest rates and exchange rates and to instead focus monetary tools exclusively on nominal quantities of specific liquid assets.

Then later you say, "The Fed still sets monthly interest rate targets and never fails to hit them."

In other words, it seems to me that the Fed is not following a monetarist course.

Mr. Reynolds. Their target is still the quantity of money. They attempt to achieve it through interest rate or nonborrowed reserves for which they are justly criticized, given the monetarist's perspective of what the target should be. The definition I was criticizing in the beginning, I think, is a fair definition of what most people understand to be the monetarist objective.

The secondary question is how you will obtain that objective or what it would accomplish if you did obtain that objective.

Mr. Bartlett. I wonder what change was made in 1979, in other words? What did they actually change in terms of what they're doing?

Mr. Reynolds. Responding to the criticism that they did not move the Federal funds rate rapidly enough, they moved the Federal funds rate more rapidly. That's about it. And then they were criticized for doing that.

Mr. Bartlett. Mr. Genetski, any concluding comments?

Mr. Genetski. Yes. Again, I agree on a factual, empirical basis more with Mr. Raboy's evaluation of the relationship between money and the economy. All of my reading suggests that there is a stable relationship there and, yes, if you get a table you can always find a period when money appears to be out of whack with the economy; but if you do what I think is much more sensible, and that is plot 6 months moving averages of money growth, 6 months moving averages of personal income as we've been doing for a long period of time, you will find what I believe is one of the most reliable relationships you can find in economics. Therefore, the money supply and how it's moving is in fact determining the outcome of the rest of the economy, including commodity prices and spending and a lot of other things. I think Mr. Raboy is completely correct in that.

The problem, as I see it, is it's been extremely difficult to get the Federal Reserve to pursue a policy of slow, stable monetary growth. It's been as difficult to convince people in general that that will be the policy that is going to be pursued in the future. And I'm in Mr. Reynolds' camp when it comes to trying to place some sort of an automatic rule as opposed to discretion on the Federal Reserve Board—in his camp in the sense that I would like to see this rule be more related to feedback information from the general marketplace than I would an automatic rule that specifies a growth in the monetary base.

The problem of a rule specifying a given growth in the monetary base is it would not have prevented the Great Depression and right now it would be giving us some very conflicting evidence about which monetary measures should be followed.

I would like to say just one other thing with respect to Fed policy since October 1979. I believe the key question, to the best of my knowledge, has not been asked of the Fed; that is, are they actually attempting, to the best of their ability, to pursue policies of slow, stable monetary growth?

When I have really tried to push some of the Fed representatives to answer this question, the answer that I receive is, no, that what they have in mind is a long-term monetarist policy which on average, over an extended period of time, which may be as short as 6 months but certainly as long as 1 year, is designed to allow the money supply to grow in a fairly steady manner. But they are not trying to stabilize money growth within a 1-month, 2-month, 3-month, or certainly a short-term basis.

I believe that that would be a very desirable policy. I'm skeptical, however, as to whether or not we could continue that sort of policy as economic conditions, personalities, political pressures change over time, and that's why I would like to see something such as I testified on be put into order to give us more assurance that we could avoid these types of major recessions and inflationary booms that have been so painful.

Mr. Bartlett. Mr. Raboy, any concluding comments?

Mr. Raboy. I apologize for putting words in your mouth, Mr. Reynolds. My text said: "supporters of the type of gold standard that Reynolds suggest." So I will blame it on your supporters.

The primary question that comes up—and it's basically an empirical one—has to do with this idea of velocity or whether or not there's a stable demand for money; and again, what I feel we have to stress for policy purposes is what goes into this velocity?

If you were to see radical changes in velocity, you would have to ask yourself why; what is going on that affects the way people treat their dollars relative to other liquid assets? If I buy a car and then next year I buy two cars, there should be some stability between the amount of real goods and services out there and the way in which I use that money. And if you do see a lot of volatility, you have to ask yourself why.

Again, I would suggest that Federal Reserve policy itself in the short run has a lot to do with the fluctuations in velocity. Everything that determines velocity has been volatile. Hence, one would expect that in the short run there should be some volatility in velocity. If the Fed is jacking up M_1 and then contracting it and then jacking it up so that there is an enormous amount of variance around inflationary expectations, and we know that inflationary expectations themselves feed directly into the demand for money, as Phil Cagin pointed out when he did his studies on hyperinflation, then we should expect that as the volatility around money supply decreases, the volatility in velocity and the demand for money decreases also.

What is money? What do people use money for? Primarily to carry out transactions so they don't have to barter, so they can economize on both their labor time and their leisure time. And if you eliminate a lot of these other areas of uncertainty, there are steady state properties to this economy. The economy does tend to grow at a certain rate. Innovation tends to grow at a certain rate over time in the financial area as well as in the economy at large. And it is natural to assume that in those types of situations the demand for money should bear some stable relationship and, again, certainly over a year's period of time it does.

I strongly believe that the majority of the problems in the monetary area is associated with giving the Fed discretion, the fact that the Fed has discretion. And again, look what happened in 1981 and 1982. The President was elected on a tight monetary policy and, lo and behold, we see M_1 contracted. Then we see Secretary Regan and Murray Weidenbaum on nationwide TV suggesting that money is too tight, threatening the recovery. And possibly, coincidentally, after these conflicting signals, we do see an expansion in the money supply. Then when the President get on nationwide TV again and says that, no, it is this volatile monetary policy that is threatening recovery, there was a contraction. I firmly believe that political pressures are responsible for some of the volatility in Federal Reserve policy because the Fed has discretion.

Give them rules and force them to respond to them—and it's not an arbitrary rule. If there is a linkage between nominal activity and the money supply and if there are ways in which we can control the money supply, as Mr. Genetski suggested, and if the problem is that the Fed hasn't been following those rules, then create a situation where they have to follow those rules.

Mr. **Bartlett**. Thank you, gentlemen; there are many other questions we would like to ask but time grows short and on behalf of Senator Jepsen I will close this hearing. However, we will leave the record open if you have any final comments to make. Thank you. The subcommittee is adjourned.

[Whereupon, at 12:55 p.m., the subcommittee adjourned, subject to the call of the Chair.]

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